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SELECTED ASPECTS OF FINANCIAL MANAGEMENT IN REHABILITATION FACILITIES: A RESOURCE MANUAL

Jerome R. Lorenz

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& Richard J. Baker

A Publication of the
National Association of Rehabilitation Facilities
Washington, D.C.

Selected Aspects of Financial Management in Rehabilitation Facilities: A Resource Manual

By

Jerome R. Lorenz
Chris S. Graham
Patsy L. Hashey
and
Richard J. Baker

Rehabilitation Institute
Southern Illinois University
at Carbondale

A Publication of the

National Association of Rehabilitation Facilities
Washington, D.C.

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Dedication

This manual is dedicated to those courageous persons who are actively working to overcome severe disabilities and handicaps with the goal of achieving maximal independent living and vocational status.

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INTRODUCTION

It is estimated that there are over 5,000 rehabilitation facilities in the United States serving more than one and one half million clients annually at a cost of over two billion dollars.[1] Operating revenue is generally obtained from various state and federal sources, contract revenues, charitable donations, business and industry, the sale of new and refurbished goods, and so on (Greenleigh, 1975; ETA, 1977). It is fairly clear then that regardless of the number, rehabilitation facilities represent a fairly large business enterprise in the United States economy, and the management of a facility's fiscal resources is a task of considerable importance.

Historical Perspective

The beginnings of rehabilitation facilities in the United States can be traced to the Perkins Institute for the Blind in Massachusetts, established in 1865. Other facilities of similar function and structure were started in this period until the turn of the century. The leaders of these early programs had limited training and experience in financial management since most were trained or had experience in medicine, the ministry, and the early ranks of social workers (Lorenz, 1977). Most of those facilities went out of existance due to financial problems a few years after their beginning.

The first Goodwill Industries in Boston, that is, Morgan Memorial Cooperative Industries and Stores in 1905 under the leadership of Dr. Edgar Helms, ultimately changed the future of rehabilitation facilities. Dr. Helms was perceived to be a human service provider/rehabilitationist who was quite advanced for his time and, in fact, some of his early influences are still felt in the field of rehabilitation today (Plumbe, 1965). His contributions to direct service not withstanding, Dr. Helms' greatest contribution to the rehabilitation facilities industry may have been his recognition of the need for and subsequent emphasis on sound business and financial management. The appointment of Mr. Fred C. Moore to manage the financial/business aspects of the facility was one of the first uses of a business person in facility financial management. That legacy is carried forward even today in the Goodwill Industries of America (GIA) Executive Training Program which provides very well developed management training in financial management. Also some of the earliest research and demonstration work on financial management in rehabilitation facilities came out of the Goodwill movement (Evans, 1964; Galloway, 1971; Goodwill Industries of America, Inc., not dated).

The growth of the rehabilitation facility movement from the early 1900's through the 1940's was slow but steady. Such facilities were largely community based and operated primarily from private donations and production revenues. Serious financial problems were faced by the early operators, centered for the most part on acquisition of funds and making those very limited funds stretch as far as possible. There was often a ministerial quality about these facilities in that salaries and wages paid to administrators and staff were quite low, often only what was necessary to provide subsistence for the workers while they served others. Formal accountability issues were generally limited to basic legal and ethical requirements; more sophisticated analysis of efficiency and effectiveness were basically forty to fifty years in the offing.

The 1950's provided the first use of public funds to support the development and operation of rehabilitation facilities. The number of facilities grew rapidly, and the size

[1]In response to a NARF staff inquiry in September, 1981, the U. S. Department of Labor reported that their records show 4,295 vocational facilities certified as either sheltered workshops, work activity centers or both. NARF records show an additional 442 medical facilities in the United States. Additionally, it is roughly estimated that there are between 100 and 200 free standing independent living facilities supported by RSA and other sources. Facilities which do not fit into the above classifications, bring the estimated total to over 5,000. The estimates of clients served are based on Stout Vocational Rehabilitation Institute vocational facility survey data (1980) adjusted to reflect addition of estimates of persons served in medical, independent living and other non-vocational facilities. Cost estimates are based on updated estimates from the Greenleigh Associates, Inc. study (1975) and NARF records. Such cost estimates are considered the softest of these estimates and actual figures are probably higher.

and diversity of the population being served expanded in similar fashion (Nelson, 1971). The 1960's only reinforced those developmental trends established in the 1950's. The nature of the financial problems began to shift during this period, however, from basic survival issues to greater emphasis on public accountability and disclosure issues.

The 1970's could best be described as the age of accountability for rehabilitation facilities. With the volume of public dollars going into such programs (growing at what was perceived by some as an alarming rate), greater pressure was established for increased controls and more sophisticated analytic techniques. The role strain for executives also increased. Most of the directors who gained their experience in the earlier periods (pre-1970) had little experience with these types of financial issues. Because of the veritable explosion of facilities in the 50's and 60's, many of the newer executives—selected for their professional service delivery competence—had virtually *no* management training or experience. The Rehabilitation Services Administration (RSA) noted this problem in the mid 1960's and began to support training for facility administrators although these programs were quite limited relative to the number who needed training. Moreover, such programs frequently had limited capabilities for training in the financial management area, and little specific financial management research was available or even in the process of completion on this topic as it applied to rehabilitation facilities.

Slowly, almost painfully at times, the sophistication of financial management in rehabilitation facilities has improved over the past three decades. This can be attributed to the painful experiences of others whose facility's bankrupted, whose executives had been imprisoned for financial malpractice, whose facilities went into a severe service curtailment for an extended period, and so on. A base of knowledge in financial management was beginning to build via trial and error and limited research, and some of the practicing executives were becoming proficient in the use of that knowledge base. The situation, however, could hardly be described as ideal, even at present, since many facility executives are still untrained in financial management. Even though some progress has been made, financial management in the rehabilitation facilities industry may be as much as 15-20 years behind common financial management practices used by business and industry. To make matters worse, the nation's economy has progressively deteriorated with the arrival of the 1980's; pressure for greater accountability, maximum efficiency, and optimum cost benefit on those who expend public dollars has peaked. During a period when the skills of the most sophisticated financial managers from business and industry are being taxed to the extremes, the rehabilitation facility industry managers are only starting to develop expertise in financial analysis and data based management. The need to improve and catch up is becoming eminently clear.

Most rehabilitaion facilities today are able to comply with the minimum requirements for budgeting, accounting, costing, and reporting imposed by funding sources and accrediting organizations. Frequently, this is accomplished with the help of board members and paid financial consultants. The problem is that this minimal compliance with external management requirements often does not begin to deal with the real financial management needs of the facility in terms of its continued survival and effective service provision. It is no longer enough to simply provide safeguards for the facility's assets and have a basic bookkeeping system which produces simple accrual based financial reports. Management needs more information than ever before about its operation, not just financial data but data of almost every sort. It also needs refined analytical skills and sophisticated interpretive abilities to use that information for sheer survival, not to mention maximizing service effectiveness with rapidly declining resources.

This problem has both a micro and macro component. We have discussed the needs of individual facilities (the micro system) for these skills and information, but what about the macro system, that is, the rehabilitation facility industry itself? To the extent that individual facilities are unable to generate sufficient data for their own survival, so must the industry in general suffer. It is virtually impossible to build a reliable and responsive macro data base when there are no micro systems to generate reliable output to form the input for the macro system. Is this any less of a problem? Not really. The need for meaningful data bases is clearly illustrated in Washington, D.C., where competing government programs must justify every aspect of their operation with accurate data. Many of these programs have at their fingertips some of the most sophisticated data bases in the world, for example, defense, energy, transportation, and housing. When we look at the rehabilitation facility industry's available data base, it is almost like comparing a simple abacus with a tenth generation computer.

Is it only to compete at the public coffer that we need this type of macro information system? Not really. To compete effectively for private philanthropic dollars, for meaningful contracts with business and industry, or for new product markets, we need a highly sophisticated data base, albeit in slightly different arrays. In short, if rehabilitation facilities are to survive the 1980's on an individual basis and as an industry, we will have to advance our skills and abilities in financial and information management by a quantum leap at both the micro and macro levels.

RSA Data Base

The Rehabilitation Services Administration (RSA) is currently the federal agency charged with the responsibility of working with the states to ensure the delivery of rehabilitation services to the handicapped residents of the nation. RSA also has the responsibility, as part of the administrative branch of government, to represent the needs of handicapped persons and the capability of the service delivery system to the Congress. To accomplish this two pronged mission, a state/federal partnership was formed between RSA and the various state rehabilitation agencies. To deal with the substantial information needs associated with operating this state/federal partnership, RSA, in consultation with the state rehabilitation agencies, established standards for the states to develop and operate information systems and has established a national data base in the form of the R300. The R300 is the actual data collection system, that is, the forms and computer programs which produce the data base for the information system. This data base provides information concerning handicapped persons upon closure relative to application for service, eligibility determination, service delivery and direct outcomes as a result of the rehabilitation services provided. Thus, this R300 system, described as the most complete system in all of the human services (HDS, 1978), could be viewed as the information system for the state/federal system to manage its services and to provide necessary information to the Congress.

One of the unique features of the state/federal rehabilitation system is the very strong interrelationship between the public and private sector. In fact, according to Mary Switzer, the first Commissioner of RSA, that strong interrelationship and interdependence between the public and private sector may have been the greatest single source of strength for the system. The United States has had a network of private not-for-profit, community based rehabilitation facilities which predated, by at least 30 years, the passage of the first federal legislation dealing with civilian rehabilitation. That private network, using philanthropic dollars and strong community commitment, provided substantial service to handicapped persons prior to the federal efforts and in cooperation with, but not funded primarily through, public sources from 1920 through the early 1950's. With the passage of the 1954 Rehabilitation Act, the rehabilitation program was dramatically expanded to serve many more groups of handicapped persons and, for the first time, funds were made available to develop and purchase service from private facilities. In that fashion, according to Switzer, the rehabilitation program was able to extend the partnership to communities and to avoid large outlays of capital to build federal and state rehabilitation facilities at the local level. This was in sharp contrast to the model developed by several European countries. The United States model promoted a streamlined, cost effective system and resulted in a rather popular human service program which has generally enjoyed bipartisan support (Lorenz, 1973).

Thus, the private sector has produced a substantial portion of the service delivered in the public rehabilitation system from the beginning of the public program to the present. One of the problems, however, is that these private facilities have never been fully included in the R300 data system. A few states have developed some independent data collection systems for facilities; RSA collected some preliminary data from a nonrepresentative sample of facilities via the Training Service Grant Program. However, no systematic representative national data system for facilities was ever developed and implemented. This provoked serious questions concerning the adequacy of the information system, for example, does the system accurately represent the full picture of rehabilitation services provided for handicapped persons in this country?

Recongnition of that knowledge gap was identified by the RSA, the state vocational rehabilitation agencies, and the facilities themselves. Therefore, it was determined essential to develop an information system for rehabilitation facilities—a system that would provide meaningful and useful financial data.

Walker and Associates, under contract with the RSA, developed the Facility Information System (FIS) in response to the knowledge gap which would link rehabilitation facilities and the programs they provide for handicapped persons to the state/federal system.

Following the development of the FIS, the system needed to be objectively field tested to insure accuracy and clarity, and to gain acceptance and support of rehabilitation facilities. Also, many facilities administrators lack expertise in the technical aspects of financial management. Hence, a need was also identified for training materials and short-term training packages to upgrade financial management capabilities. It was also deemed necessary to develop resource and training materials to assist rehabilitation facilities and state VR agencies to develop viable working agreements for the purchase of services. The overall project then has three components: 1) the FIS as the major reporting precedure which consists of *The Facility Resource Inventory* and the *Program Management System,* 2) the field test and evaluation of the FIS and its related training materials, and 3) the development and evaluation of a resource manual and trainer guide in financial management, and a resource manual and trainer guide in facility/state agency working agreements.

NARF Project

The National Association of Rehabilitation Facilities (NARF) was selected to manage and coordinate the field test and revisions to the FIS, and development and revisions of the supportive materials. Since NARF is composed of facilities, understands their special problems, and is viewed by the field in a collegial verses an adversarial role, it would be most capable of accomplishing the purposes and tasks set forth.

NARF worked closely from the outset with RSA to ensure a product that would fulfill the original intent and produce the most meaningful information system for state of the art data based management in U.S. rehabilitation facilities. To accomplish that end, NARF used a number of subcontracts and cooperative agreements to broaden the input, develop supplemental resource and training materials, and increase the likelihood of broad acceptance of the final products. Six state VR agencies, preselected by RSA for a Model Evaluation Units Project, were brought into this project to serve in the field test and evaluation. In five of the states there were facilities associations. These agreed to participate as well. NARF, the VR agencies and the state associations cooperated in selecting sample facilities and carrying on the field test and the evaluations.

The Multi Resources Center (MRC) of Minneapolis, Minnesota was selected to develop training materials as a result of their track record with the Rehabilitation Continuing Education Program for Region V. The university facility administration training programs were selected by region to do the pilot training due to their familiarity with facilities, general acceptance by facilities, and their prowess to deliver training programs of this nature.

A number of products will be produced as a result of the NARF project. These include: 1) the revised FIS, instructions for facility usage, and training materials for use by qualified trainers to prepare facilities to use the FIS, 2) a guide to purchase of services working agreements with a discussion of the pros and cons to various arrangements, as well as some training materials to introduce this information to appropriate representatives of facilities and the state agencies, and 3) two sets of materials for facilities in the area of financial management. The first materials were in the form of a trainer's guide *Basic Financial Management Concepts for Vocational Rehabilitation Facilities* (Center for Training and Development, 1980). The document was developed to provide trainers with lecture materials, class exercises, and examples for use in one or two day training sessions with facility administrators who lack background in financial management. The second document was conceived as a resource manual on selected aspects of financial management in rehabilitation facilities, designed such that it could be used by a facility administrator who wished to upgrade skills in selected areas of financial management on an independent basis, or used by a trainer in concert with the trainer's guide (mentioned previously), or used by a trainer to provide more indepth training in selected areas of financial management in rehabilitation facilities for periods ranging from one day to one week. This *Selected Aspects of Financial Management in Rehabilitation Facilities: A Resource Manual* is the result of that effort.

What This Resource Manual Is

This *Selected Aspects of Financial Management in Rehabilitation Facilities: A Resource Manual* was designed for the practicing rehabilitation facility administrator to improve knowledge and upgrade skills in selected areas of financial management which, based on current practices, were identified as areas in need of attention. It was assumed that the practitioner would have some basic knowledge and skill in the financial area, at least that gained through practical application in complying with the various financial requirements generated by the multitude of funding sources, regulatory agencies, accrediting bodies, and lay boards with whom rehabilitation facility personnel would likely have to deal. It was further assumed that the reader would have considerable knowledge of rehabilitation practices and rehabilitation facilities. Each topic was approached from a management perspective rather than from that of a technician. The manual was designed to assist the administrator in directing/leading the financial management function as opposed to carrying out every step of the process. The executive should not be a slave to an accountant or accounting staff but rather a full and active participant of that group. To that extent, the text assumes that the facility has more than minimal resources for bookkeeping and accounting but not the most sophisticated staff resources in that area. In short, it was written for the moderate sized rehabilitation facility that places considerable responsibility on the executive for financial decision making.

Each chapter introduces a particular problem in the financial management of rehabilitation facilities, reviews selected literature on that topic from the general management literature and, where possible, is followed by information on that topic specific to rehabilitation facilities. The basic principles that apply to the topic were then extracted, a specific example supplied, and, lastly, a problem provided to allow the reader to test acquired skills and

knowledge of the topic. An answer guide is provided to give needed feedback on each problem presented.

It is suggested that the reader select a topic of interest, read the background materials, and then very carefully examine the example to ensure maximum understanding. Next, the reader should work the problem exercise without consulting the answer guide. After completing the exercise with the best answer possible, consult the answer and determine discrepancies. Armed with those discrepancies, the reader should then go back to the chapter content and determine the reason for the differences. It should be remembered that for many of these problems, answers may not be absolutely right or wrong, only better or worse, given a variety of assumptions.

This document may also be used in group situations with a trainer in connection with the basic training package or separately. For use with groups, it is suggested that the trainer review the material on the topic for training and present the example in careful detail. The class would then work the problem exercise in groups of two or three, present their findings, and discuss the differences among groups as well as differences with the answer guide. In this manner the class will determine the strengths and weaknesses of each approach depending upon the particular circumstances.

It is hoped that by using the *Resource Manual,* facility executives will improve their knowledge and skill in the financial management area. Increased knowledge and skill should increase the likelihood of the survival of their facilities and improve the effectiveness and efficiency of their service delivery programs. As that occurs, it is further hoped that more sophisticated data from facilities can be included in the FIS which in turn will improve the data bank available to RSA and the Congress. The net result will enhance industry survival and improve current practices in rehabilitation facilities.

What This Resource Manual Is Not

This *Resource Manual* was not intended to be all things to all people. It assumes certain background knowledge and information of the reader. To the extent that any given reader lacks that background or wants information beyond the scope of this manual, sources of selected topics were identified below. The reader may seek that background prior to or simultaneous with use of this resource.

This *Resource Manual* is not an introductory text to rehabilitation and rehabilitation facilities. It does assume, based on research about practicing facility administrators, that the reader has considerable experience and/or training in rehabilitation in general and rehabilitation facilities specifically. For the new facility executive who may be approaching the task with limited or no background in rehabilitation and/or rehabilitation facilities, the following are suggested as appropriate background:

Bitter, J.A. *Introduction to rehabilitation.* St. Louis, Missouri: C.V. Mosby, 1979.

Nelson, N. *Workshops for the handicapped in the United States: A historical & developmental perspective.* Springfield, Illinois: Charles C. Thomas, 1971.

Rubin, S.E., & Roessler, R.T. *Foundations of the vocational rehabilitation process.* Baltimore: Univeristy Park Press, 1978.

Wright, G.N. *Total rehabilitation.* Boston: Little, Brown & Company, 1980.

The *Resource Manual* is not an introductory text to management; it assumes at least some level of background in management (be it experiential or from specific training). Some executives are catapulted into that role from direct service without benefit of first line or middle management experience. Such a reader may wish to consult the following sources:

Borst, D., & Montana, P.J. *Managing nonprofit organizations.* New York: AMACOM, 1977.

Emener, W.G., Luck, R., & Smits, S.J. (Eds.) *Rehabilitation administration & supervision.* Baltimore: University Park Press, 1981.

Kazmier, L.J. *Principles of management.* New York: McGraw Hill, 1974.

Robbins, S.P. *The administrative process.* Englewood Cliffs, N.J.: Prentice Hall, 1980.

The *Resource Manual* was not designed to prepare rehabilitation facility executives to perform the accounting functions for two reasons: first, almost any community large enough to have a rehabilitation facility will have a qualified accountant available who can assist in developing the accounting system; and second, there are sources readily available if the executive wishes to develop accounting expertise. Since the manual was designed to prepare non-financial managers to use the results of a good accounting system to improve the management of the facility, executives who wish to develop greater skills in the area of accounting, should consult the following:

Del Grande, D. *An accounting manual for rehabilitation workshops.* San Francisco: University of San Francisco, not dated.

Gross, M.J., & Warshauer, W. *Financial & accounting guide for non-profit organizations.* New York: John Wiley & Sons, 1979.

Horngren, C.T. *Introduction to management accounting* (4th Ed.). Englewood Cliffs, New Jersey: Prentice Hall, 1978.

The *Resource Manual* is not an advanced text for accountants and other financial managers to pursue advanced topics specifically related to rehabilitation facilities. Such a document is yet to be written and well beyond

the scope of this book. Accountants and other financial managers may find certain aspects of this manual useful, particularly those data specific to facilities, but they are not the target audience. For those managers, financial or otherwise, who are interested in the computerization of facility fiscal management, that is also beyond the scope of this manual. Readers with such interests are referred to:

American Institute of Certified Public Accountants. *The Auditor's study and evaluation of internal control in EDP systems.* New York: Author, 1977.

Buckley, J.W., Nagaraj, M.R., Sharp, D.L., & Schenck, J.W. *Management problem-solving with APL: A guide to the solution of typical accounting and finance problems through APL time sharing.* Los Angeles, California: Melville, 1974.

Li, D.H. *Accounting computers: Management information systems.* New York: McGraw-Hill, 1968.

Sweeny, R.B. *The use of computers in accounting.* Englewood Cliffs, New Jersey: Prentice Hall, 1971.

An Overview Of Chapter Contents

Each chapter of the *Resource Manual* contains a topic selected for its relevance to current problems of financial management in rehabilitation facilities.

Chapter 2 deals with the organization of the fiscal management functions within a rehabilitation facility. Most rehabilitation facilities are organized around the service or production functions they were established to accomplish. Because most facility executives lack specific background in financial management, those functions associated with financial mangement frequently evolve from the organizational point of view in a rather unplanned fashion. This of course, can and does, produce specific operational problems to the extent that the evolution has not been adequate. Chapter 2 reviews those financial management functions that must be accomplished by any entity and examines some variables for consideration when developing an organizational framework. Next, specific considerations for organizing the fiscal management functions of rehabilitation facilities, as well as examples which represent state-of-the-art in facility organizational structure, are discussed. Finally, a practice exercise is presented to give the reader experience in organizing the financial management functions of a facility given certain conditions.

Chapter 3 deals with a variety of control issues from an internal management perspective and from the point of view of the audit. The chapter establishes the principles of fiscal control to which any facility should adhere. It then examines the types of audits and how to prepare for them, and the most frequent exceptions and how these can be avoided. An example which examines the control issue in-depth is provided and followed by a practice exercise.

Chapter 4 examines budgeting for rehabilitation facilities, the purposes of formulating a budget, and the various types of budgets. The actual development of a budget was demonstrated using techniques considered useful for the typical facility. The reader is referred to other sources for specialized budgeting techniques which may be relevant only for selected facilities. Some specific budget analyses and formats are presented, and finally study questions, designed to apply some salient budgeting concepts, are set forth.

Chapter 5 deals with both financial and cost accounting. The section on financial accounting is, by design, only a brief overview. It gives the reader a limited introduction, but suggests other resources which will allow those interested to seek further information. Cost accounting is presented in some detail to include approaches and specific methods, followed by examples applied to production and nonproduction oriented facilities. Finally, a specific practice exercise was provided for the reader to test acquired information.

Chapter 6 prepares the reader to analyze the products of accounting and obtain the necessary information to make better financial decisions. A variety of concepts and computational formulae are examined with particular emphasis on types of standards. Selected measures are used in practical exercises, to include the anatomy of a bankruptcy. In some ways this may be the most valuable chapter for the rehabilitation executive.

Background To The Example

For ease of illustration and to reduce the amount of background necessary, one facility was used for all case examples in Chapters 2, 3, 5, and 6. The following is an introduction and background statement concerning NOVA Industries from which the examples are drawn. It is a hypothetical entity; any simularities to an actual facility are purely coincidental.

NOVA Industries

NOVA Industries is a bright star on the horizon of rehabilitation. It has been getting brighter every year since its conception due to increased public awareness and support for its efforts. The present turbulent times have caused a slight dimming of the luminating powers of the entity and this condition seems to be continuing on the negative side. If the NOVA effect is to be counteracted, some very definitive steps must be taken. The administration of NOVA Industries is now very much aware that something has to be done. But what?

NOVA Industries is a private organization, established as a not-for-profit corporation to serve the handicapped citizens of a three county catchment area. It is a typical rehabilitation facility, in a typical community, in an average size state. Its primary mission is to provide vocational rehabilitation services and renumerative work to adult handicapped individuals. The following services are provided by NOVA:

Intake
Vocational Evaluation
Work Adjustment
Work Activity
Sheltered Employment
Skills Training
Transportation
Recreation
Counseling
Residential Living

These services have evolved from specific requests by referral agencies and periodic needs assessments. The facility's reputation is good and it seems to be providing high quality comprehensive services. A very active board has evolved over the past five years and works closely with the chief executive officer (CEO). The composition of the board, outlined in an organizational chart by committees, is displayed in Exhibit 1-1.

The CEO was employed to operate the organization as effectively and efficiently as possible and to provide top quality services to clientele. With this in mind an advisory committee was formed to consult with the board on critical, material issues that would be related to facility policy and services. This advisory group is made up of the CEO, comptroller, production coordinator and the rehabilitation coordinator.

Funding is primarily from local philanthropy, county and city mill levys, grants, fees for service and subcontract income. The facility recently began addressing the problems of the industrially injured sponsored by private insurance carriers. Money is periodically awarded from revenue sharing, and the present building was a joint effort by the city and the Department of Housing and Urban Development. The facility vehicles used in transportation were obtained through a matching grant with the Department of Transportation. The facility plans and executes a local three county fund drive every three years with moderate success.

NOVA is accredited by the Commission on Accreditation of Rehabilitation Facilities (CARF) and has Division of Vocational Rehabilitation (DVR) approval to serve its clientele. The facility attempts to employ qualified, highly motivated staff. The organization chart for NOVA is displayed as Exhibit 1-2.

EXHIBIT 1-1
Composition of the NOVA Board of Directors

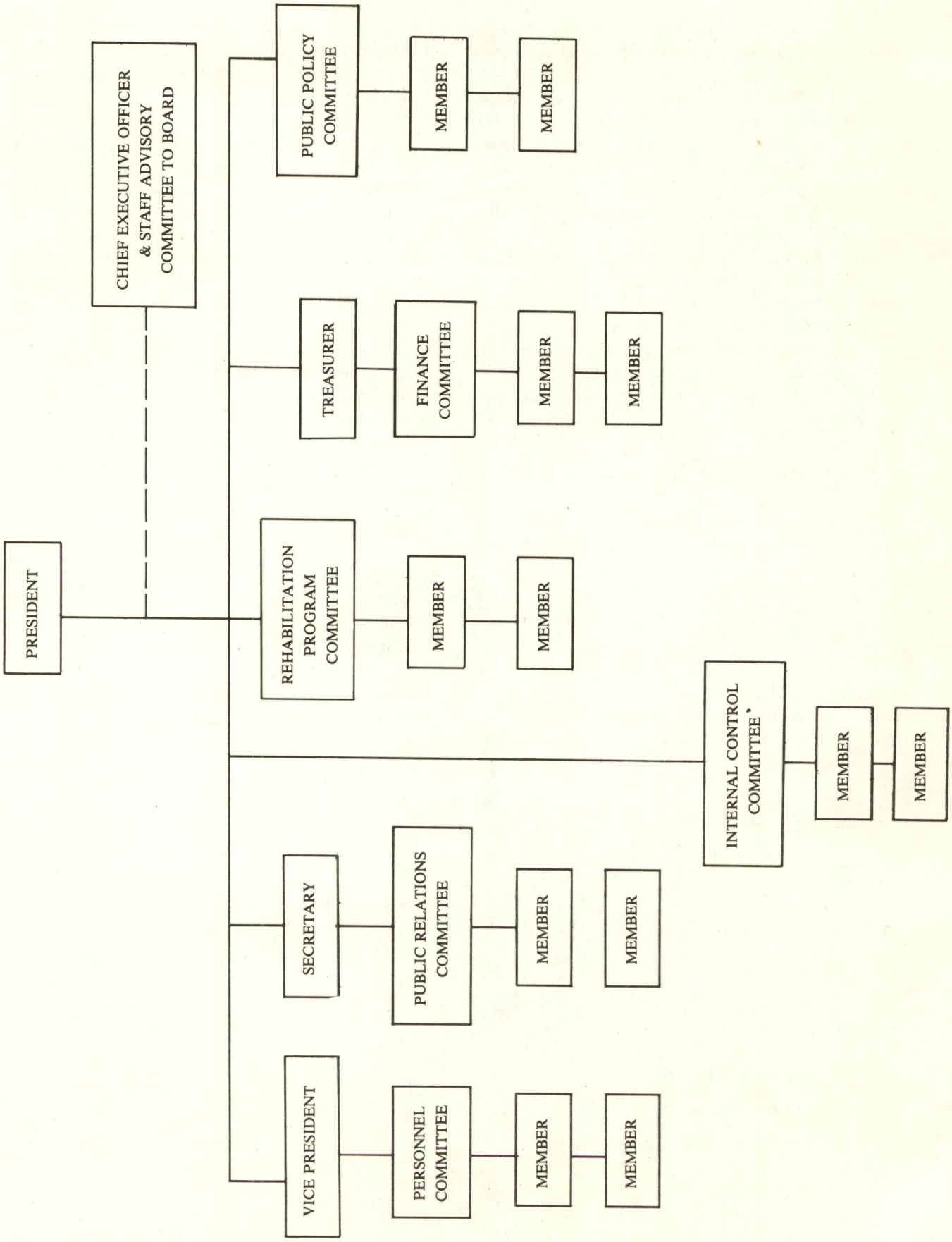
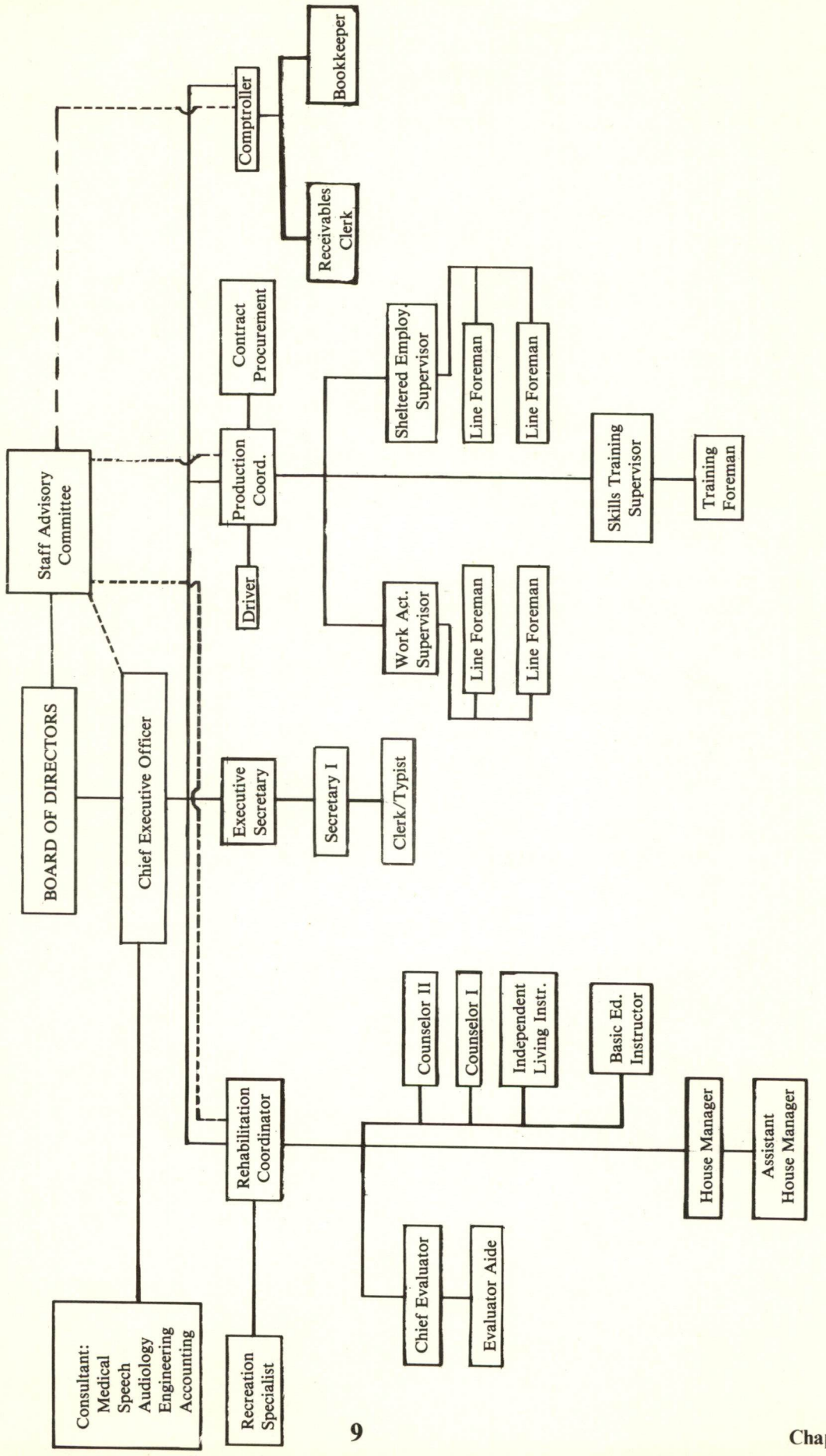


EXHIBIT 1-2
NOVA Organizational Chart



The physical plant is considered adequate for its present needs and expansion is possible using land adjacent to the existing buildings. The plant is 15 years old and has a life expectancy of 15 more. It has been completely remodeled for accessibility and safety. The facility staff are quite active in the local community and are often called upon to speak to various organizations and to consult with industry on job restructuring. Expansion is planned in the area of retail sales and Projects With Industry.

Descriptive adjectives most used to characterize the overall facility are conservative, traditional, purposeful, and receptive. It is a bright star now and has a chance to continue as a model for others to follow; the "chance" directly related to what steps are taken in the near future. The following chapters present the approach that NOVA uses in establishing a sound fiscal management foundation from which to work in the future.

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Lorenz, J.R. Our roots. In J.R. Lorenz, I.B. Hawley, & A.A. McDonald (Eds.) Rehabilitation administration: Fact or fiction? A symposium. *Journal of Rehabilitation Administration,* 1977, 1(4), 24-27.

Lorenz, J.R. Rehabilitation services: Public vs the private sector. *Rehabilitation Literature,* 1973, 34, 258-266+.

Nelson, N. *Workshops for the handicapped in the United States: A historical and developmental perspective.* Springfield, IL: Charles C. Thomas, 1971.

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ORGANIZING THE FISCAL MANAGEMENT FUNCTION IN REHABILITATION FACILITIES

Any entity has certain functions which must be accomplished in the financial management area regardless of the purpose, size, complexity, and other pertinent factors of the enterprise. It is management's responsibility to organize those functions in the most efficient and effective manner possible given certain environmental constraints. The recognition and organization of those functions is a minimum condition for the effective financial management of that entity. The purpose of this chapter is to examine the financial management functions which must be accomplished by any rehabilitation facility, to examine those factors which influence the organization of those functions, and to analyze the impact of those factors on the structure. An example of organizing the fiscal management functions in a rehabilitation facility is then examined and accompanied by a practice exercise.

Fiscal Management Functions of Any Rehabilitation Facility

At the most basic level, the basic functions of planning, organizing, directing, and controlling must be accomplished in the area of financial management. These functions are the responsibility of the chief executive officer (CEO). For a productive examination of the organization's fiscal management process, a more detailed analysis of the specific functions is necessary. The specific financial functions generally perceived to be necessary for any entity (Bittel, 1978) include:

1. Custody of assets, that is, the protection of assets which includes physical protection, record keeping, and checking on presence and use of assets.
2. Control of cash flow to ensure that cash to meet present obligations is available when needed, and to ensure that cash in excess of that immediate need is available for investment where possible.
3. Bank relations involve the selection of bank(s) for the entity which provide for the maximum bank services corresponding to the needs of the organization at the least cost or lowest possible minimum deposit.
4. Closely related to numbers 2 & 3 above is the arrangement of financing to meet the cash needs of the entity on a timely basis. This function then requires the ability to effectively forecast cash needs and to negotiate the most economical arrangement for that financing, during periods when it is needed, that is, to manage short term borrowing.
5. Risk (insurance) management is a function closely associated with number 1 above. It involves arranging coverage of the entity's assets for those eventualities when the usual safeguards fail. In other words, when the asset is lost, what proportion of its value is to be replaced, at what cost of protection, given certain levels at risk related to the operation.
6. Financial accounting is a function of recording, classifying, and reporting financial transactions of the enterprise in a way which adequately represents the true financial condition of the entity. This function produces the basic financial reports (i.e., the balance sheet, operating statement, and equity statement) used by management to make specific financial decisions.

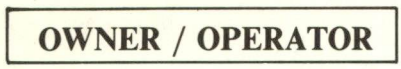
7. Auditing is a function closely associated with numbers 1 and 6 above in that it involves carefully checking the actual transactions against the recording, classifying, and reporting of such in consideration of entity policy, external laws and regulations, and generally accepted accounting practice.
8. Credit management involves the management of credit extended to entities doing business with the facility. It includes both the extention of credit (use of entity assets by another entity) and terms of such credit (at which rate, time span, and collateral required). This involves both forecasting risk and calculation of rate of return on this investment for profitability.
9. Budgeting is that function which converts the entity's program plan into financial terms by forecasting revenue and expenditures which reflect the planned operations. This function often involves the development of sub-budgets related to cost centers within the facility, coupled with application of overall analytic techniques designed to ensure the overall profitability. Once the budget is established and approved, this function continues to provide controls to ensure that actual operations approximate the budget, or specific plans for change are developed and approved. Closely linked with this latter process is the collection of data for use in subsequent budgeting cycles.
10. Acquisition of fixed assets such as land, buildings, and equipment is another function quite important for the overall financial solidarity of the entity. This would involve budgeting for these relatively large expenditures, negotiating long term bank notes to find the acquisition cost, properly valuing each major asset item, and providing adequate safeguards and records of such items. In some states such items may involve payment of certain types of taxes, even for a not-for-profit rehabilitation facility. In these cases, the management of tax payments is generally included with the acquisition function.
11. Donor relations for the not-for-profit entity, similar to investor relations for the for-profit entity, is another important function in the financial area. In the not-for-profit sector, this involves the management of pledges receivable to include accurate record keeping, billing or reminder notices, valuation of pledges receivable worth, and receipts, tax letters, and other appropriate recognitions. In many not-for-profit corporations, the forecasting of needs for pledges and projected utilization is also part of this function.
12. Cost accounting is that function which determines the actual costs for producing a variety of goods and services to include direct, indirect and joint costs. It often further involves the study of actual profitability of each of these operations and may include making recommendations to improve profitability by reduction of costs and/or increasing revenues. This function often is involved in special studies for the purpose of developing cost controls, and is likely to take on increasing importance in the 1980's.
13. The development and operation of the facility's Management Information System (MIS) is a more recent addition to the responsibilities generally included in the financial management area. This function includes the identification of the items of information to be included in the MIS, the method of collection, the recording and maintenance of the data bank, and production and analysis of management reports. The MIS generally includes financial data and information about the production of goods and services vital to the operation of the overall entity.
14. Other functions which may be included in the financial management area of any facility could include mergers, long term planning, real estate management, pensions, legal staff, purchasing, investments, and so on. The inclusion of these and other functions in the financial management area is dependent on the purpose of the facility and how it is structured.

Organization of the Financial Management Functions

How then should a rehabilitation facility organize its financial management functions to accomplish its task? The answer is that it depends—it depends on the legal basis of the entity, its purpose, size, complexity, need for checks and balances to ensure internal control (see Chapter 3 for detailed discussion), and the frequency of certain types of events which are largely financial in nature (Moore, 1970). To study this further, it may be of some value to examine a number of hypothetical facilities to determine how they are organized.

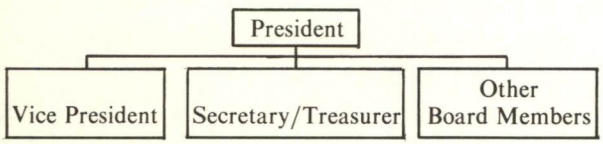
At the very simplest level, there is the proprietary operation, owned and staffed by one person (see Exhibit 2-1). In that case, the owner/operator performs all the functions of the entity, financial and otherwise. An organizational chart for such an entity would be so simple as to be almost useless. It does, however, demonstrate that financial management is ultimately the responsibility of the owner and/or the CEO. Very few, if any rehabilitation facilities, have this type of organizational structure.

EXHIBIT 2-1
Organizational Chart of a One Person Proprietary Entity



Let us now look at the simplest not-for-profit corporate entity, a small corporation whose membership is limited to its board and which does not employ any paid staff (see Exhibit 2-2). Examples are very small local or county Associations for Retarded Citizens, Easter Seal Societies, or United Cerebral Palsy groups. In this circumstance, the board of directors is the legal corporate entity, responsible for all functions of the entity. Even at this, the simplest of corporate structures, some degree of specialization is likely to occur within the board. Most often such a board would have at a minimum a president or chairperson, a vice president, and a secretary/treasurer. Such a structure would likely be reflected in the organizational chart below.

EXHIBIT 2-2
Organization Chart of a Small Not-For-Profit Corporation Which Does Not Employ Paid Staff



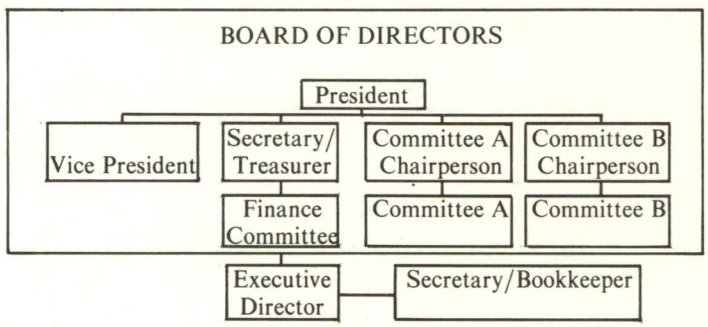
In this arrangement, the board of directors is ultimately responsible for all the functions of the entity, although the officers take on some special responsibilities. When considering the financial functions discussed above, special responsibilities are likely to be delegated as indicated in Exhibit 2-3.

As the entity increases in size, organizational complexity increases in an automatic fashion (Argenti, 1974). This point can be easily demonstrated by the addition of two paid staff to the structure described in Exhibit 2-2. It is not uncommon for a relatively small not-for-profit entity to add a paid executive director and a secretary/bookkeeper at the point which the entity can sustain this expense and the volume of work begins to exceed the time availability of the voluntary board of directors (see Exhibit 2-4). Once that happens, the complexity of the organizational structure increases significantly. First, the board is likely to establish a committee structure to better delegate its tasks. The structure of this expanded entity is likely to look something like that presented in Exhibit 2-4.

EXHIBIT 2-3
Functional Assignment of Fiscal Responsibilities Related to Organizational Chart in Exhibit 2-2

Board of Directors	President	Secretary/ Treasurer
1. Financing	1. Budgeting	1. Custody of Assets
2. Risk Management	2. Donor Relations	2. Control of Cash
3. Auditing		3. Bank Relations
4. Credit Management		4. Financial Accounting
5. Acquisition of Fixed Assets		5. Cost Accounting (if performed)
		6. MIS (if performed)

EXHIBIT 2-4
Organizational Chart of a Small Not-For-Profit Entity With Board Committees and Paid Staff



Given this revised structure, how are the financial management tasks likely to be distributed? Exhibit 2-5 provides an example of how these functions might be assigned.

As can readily be seen, most of the operational (day-to-day) aspects of the functions delineated in Exhibit 2-5 are delegated to the paid staff and the voluntary board while the officers and committee members assume a policy setting, review, and approval posture. It should also be noted that it is the paid executive who receives the majority of the responsibility for financial management. It does, however, point out the potential for role strain in this position. Often the CEO is selected for program development, fund raising , or service provision expertise. So long as the volume and complexity of financial management activities remains relatively small, the executive is usually able to learn enough on-the-job, and from colleagues and consultants, to perform these assignments sufficiently well to avoid major difficulties. If the organization, however, grows much beyond this point, the above structure almost immediately becomes non-functional due to the CEO's

EXHIBIT 2-5

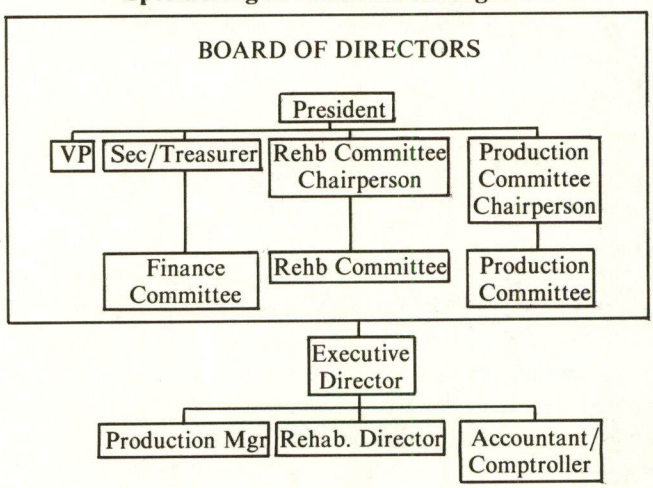
Functional Assignment of Fiscal Responsibilities Related to the Organizational Structure in Exhibit 2-4

Board of Directors	Secretary/ Treasurer	Finance Committee	Executive Director	Secretary/ Bookkeeper
1. Financing Approval	1. Credit Management	1. Financing Planning	1. Risk Management (Operations)	1. Financial Accounting
2. Risk Mgt & Policy	2. Custody of Assets-Policy	2. Auditing	2. Budget Development	2. Cost Accounting
3. Acquisition of Fixed Asset Approval	3. Bank Relations-Policy	3. Acquisition of Fixed Asset Planning	3. Donor Relations	3. MIS
		4. Budget Approval	4. Custody of Assets (Operations)	
			5. Bank Relations	
			6. Financial Accounting (Approval)	
			7. Cost Accounting (Approval)	
			8. MIS (Approval)	

limited preparation and time availability. A new position, specializing in financial management, is frequently added. Exhibit 2-6 is an example of that enlarged structure.

EXHIBIT 2-6

Organizational Chart With a Paid Staff Person Specializing In Financial Management



Under this arrangement, the accountant/comptroller is usually delegated the operational aspects of financial management under the general supervision of the executive director. The board of directors, secretary/treasurer and finance committee form fiscal policy and oversee fiscal operations. Many rehabilitation facilities in the United States operate at least at this level of size and complexity. This organizational structure presents new and different problems from any previously mentioned arrangements. For the first time we have a paid professional, trained in at least some aspects of financial management doing financial management. This can, however, be a mixed blessing, particularly in the situation where the CEO is naive in that area. Under that circumstance, the executive may become a slave or pawn to the accountant with the accountant assuming a disproportionate role in the management of the facility. In other words, the accountant may gain budget control of the agency (tantamount to program control), a factor which may work to the detriment of the service program since the accountant generally has no rehabilitation program background. This scenerio clearly illustrates the need for the executive director to have sufficient background and training to supervise the financial management functions of the facility. In other words, the CEO must be conversant in fiscal management language and concepts, to be able to read and interpret financial reports, and to be able to use available outputs to make sound financial decisions.

As the organization continues to grow, additional staff and specialization will become necessary to support the higher volume and increasingly complex financial management functions. Exhibits 2-7 and 2-8 illustrate potential organizational structures which may be necessary to provide for adequate financial management in medium to large facilities. In order to conserve space and avoid redundancy, the board of directors was deleted in both exhibits. The board would function in a similar fashion in both instances and would be organized similarly to Exhibit 2-6 except that the secretary position could become separate from that of the treasurer, causing the committee structure to become more complex. In both the medium and large facility it is essential that the executive director have sufficient knowledge of financial management to supervise its functioning and the wisdom to use its output to make sound financial decisions.

EXHIBIT 2 — 7 Organization of the Fiscal Managment Function in a Medium Sized Rehabilitation Facility

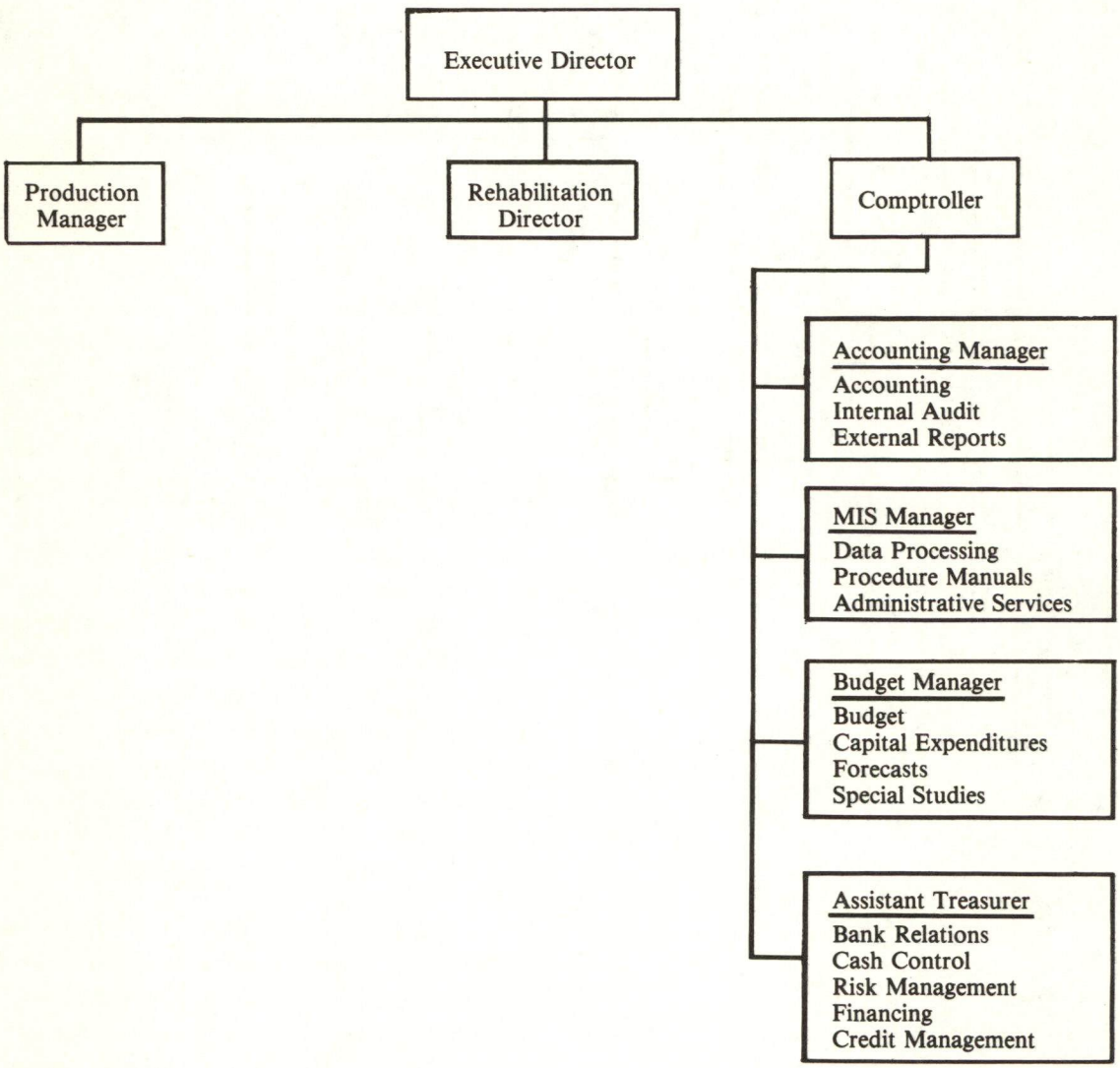
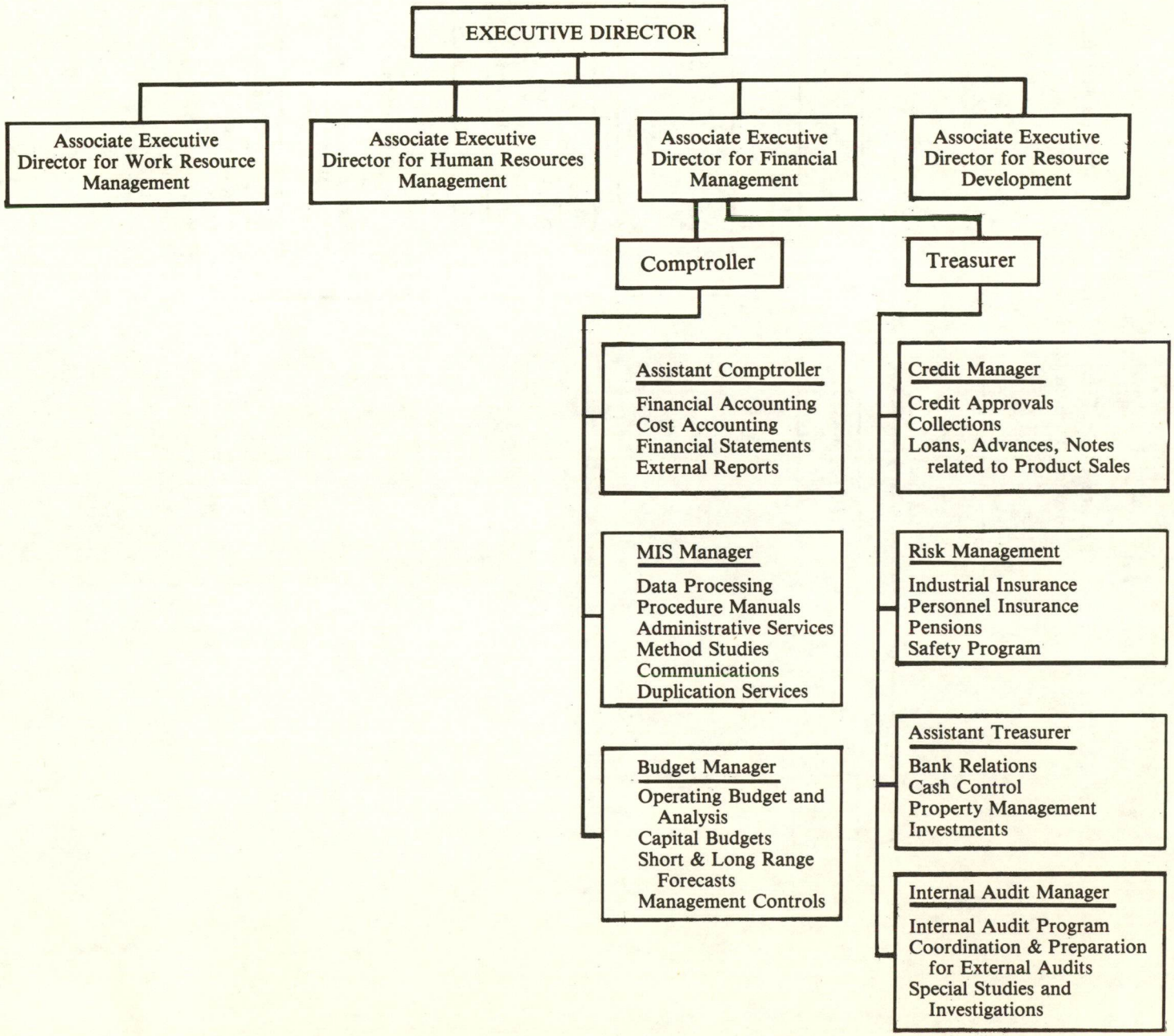


EXHIBIT 2 — 8 Organization of the Fiscal Management Function in a Large Rehabilitation Facility

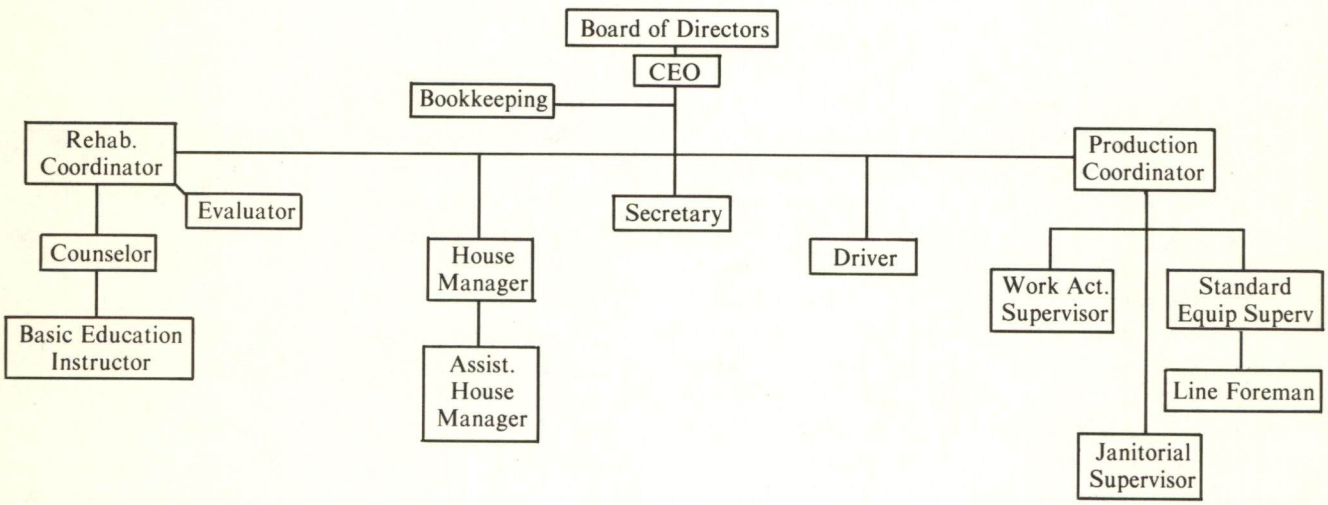


Thus far we have looked at hypothetical organizational structures for rehabilitation facilities which differed in size, level, and complexity. Each hypothetical facility had the same financial management functions to perform. However, size, related complexity, volume of financial transactions and decisions, as well as issues of internal control and functional specialization resulted in quite different structures for each facility. Each theoretical structure was designated to provide sufficient coverage to handle the financial complexity of the facility in question. Because these hypothetical structures were presented in a vacuum, they may differ to some extent from current practices in actual rehabilitation facilities. It may, therefore, be germane to examine actual practices in rehabilitation facilities, that is, how financial management functions are organized within an environmental setting—an area of research which is lacking in the body of knowledge in rehabilitation facilities. That void notwithstanding, it may be appropriate to examine how these financial management functions could be organized within a specific facility through the development of a concrete example. The example and practice exercises that follow should assist the reader in conceptualizing the functions of financial management within the context of a rehabilitation facility.

Example

NOVA Industries evolved through a series of organizational structures, none of which were purposefully developed to support financial decision making or accountability/responsibility. Initially, the organizational chart reflected a "loose" and simplistic structure, developed because the accrediting bodies required a chart (see Exhibit 2-9). It was designed along the lines of past practices and did not relate to the job descriptions of the persons involved.

EXHIBIT 2-9
Initial NOVA Organization Chart



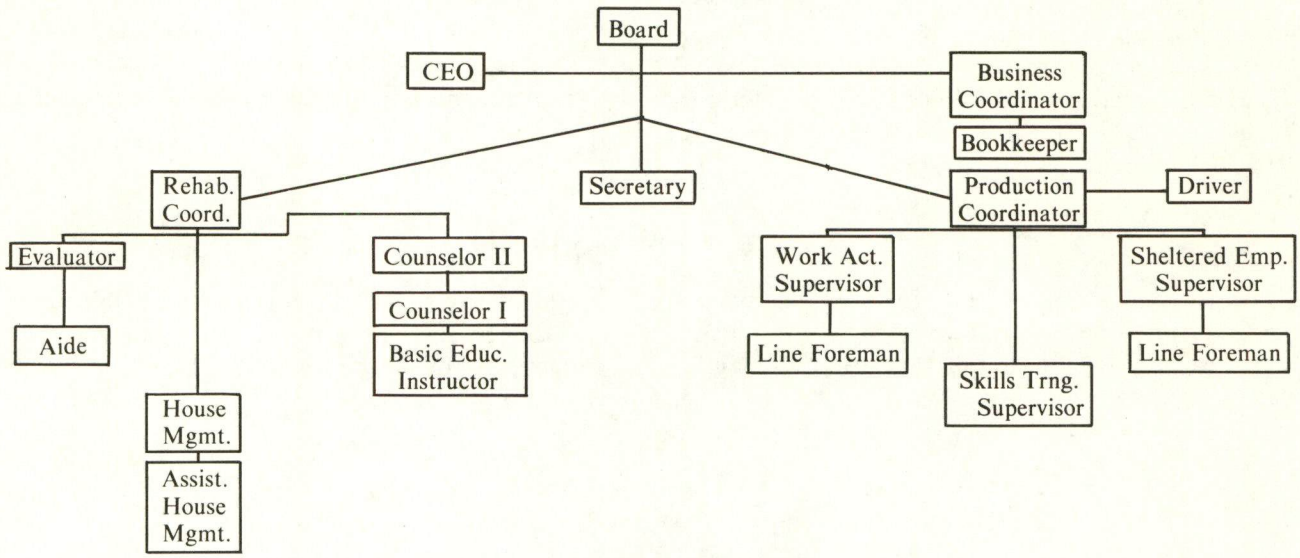
The problems encountered with this arrangement are critical to the functioning of the organization. It appears from the lack of a financial management position on the chart, that the CEO was probably responsible for that activity, aided only by a bookkeeper. When combined with the supervisory and other responsibilities necessary to maintain the facility, we might assume that the CEO was overloaded as a financial manager, that is, as accountant, budget director, information planner, credit manager, and auditor. In other words, this organizational chart suggests that the CEO was burdened by some unreasonable expectations, albeit not uncommon, which could lead to burn out and role strain.

There are some other problems associated with the organizational structure the chart in Exhibit 2-9 implies. For example, the driver and house manager report directly to the CEO, an unnecessary and inefficient practice. The secretary was probably overloaded by the clerical work of the facility. The position of the secretary on the chart implies that all clerical work is filtered through the CEO. The residential unit, supervised by the house manager is treated as an individual function separate from rehabilitation.

The organizational chart presented above could be characterized as a highly inefficient model. The flow of information and work is disruptive, the lines of communi-

cation are inefficient, and the potential for conflicting authority in regard to specific functions is evident. The next phase saw an over-reaction by the board to the results of poor management. An organizational structure was developed that was characterized by precise and total domination by the board. Under this system, the CEO was a figurehead who had little control over decision making in any area (see Exhibit 2-10).

EXHIBIT 2-10
NOVA Board-Controlled Organizational Chart



The business coordinator assumed not only expert power, but a disturbing and confusing amount of line authority. The CEO became a figurehead with little actual authority but a great deal of responsibility. The rehabilitation coordinator, secretary, and production coordinator viewed this new situation as one of split command (triumvirate of board, CEO, and business coordinator) which produced unnecessary conflict. Financial management functioning was hampered due to a loss of control by the CEO. The board was faced with operational decisions which were previously handled by the CEO. While negative in many respects, this structure did produce one positive outcome: the driver and housing staff were attached to appropriate programs in order to facilitate communication, authority, and delegation.

The NOVA Board soon realized that no matter how competent, management cannot be effective without a sound management plan. Recognizing their deficiency in this area, NOVA Industries approached the problem by identifying an organizational structure arrived at by developing a mission statement, translated into goals, and finally program content and evaluation procedures. The outgrowth of this process was an organizational chart which reflected a management structure appropriate to the functions of the facility itself. The organizational chart was supplemented by written specifications which noted the essential requirements of each level of management, of each department, and of each function. The personnel committee of the board and the chief executive officer used five basic criteria in developing the requirements of each management position, each department, and each function within the organizational structure identified. The criteria were as follows:

1. Functions and tasks must be assigned to facilitate action and decisions.
2. Lines and areas of responsibility must be clearly defined.
3. The assignment of authority must be as clear as the acceptance of its responsibility.
4. The span of control should be feasible.
5. Internal controls should be established in the structure.

The organizational chart which resulted for NOVA was presented in Chapter 1 (see Exhibit 1-2). The deficiencies noted in the previous organizational charts were corrected such that positions are located on the chart under the appropriate functions, lines of authority are clearly established, and so on. That chart is an example of how a typical medium sized rehabilitation facility could organize to maximize communication and the work flow, delineate lines of authority, and provide for effective span of control.

To summarize, a sound management plan is logically developed by identifying a structure that suits the overall functions of an organization as opposed to the reverse (i.e., determining the functions which fit a preselected structure). Therefore, step one in the process is to determine the functions of the organization, step two is to identify a structure that will serve to operationalize the functions of the organization, and step three is to translate the

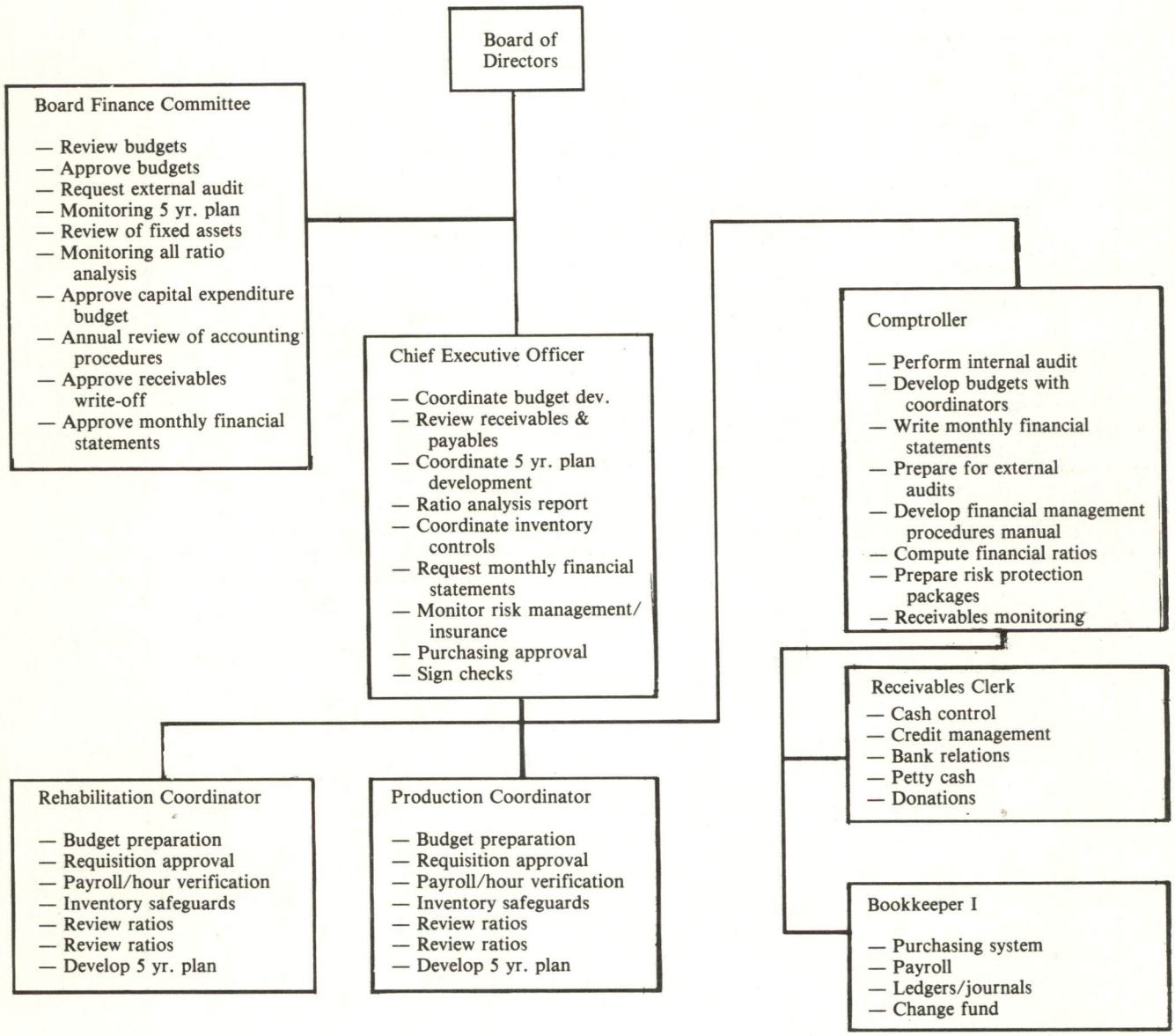
structure into an organizational chart and its corresponding parts. In other words, the organizational chart (the focus of this example) should be an outgrowth of the structural identification process.

The delineation of the organizational structure actually results in the development of three separate but highly related components which are:

1. the organizational chart
2. a responsibility diagram or matrix chart
3. job descriptions

Responsibility diagrams, the least commonly known or utilized component, could be developed for the individual areas represented by the organizational chart: rehabilitation, clerical, production, and comptrollers. Since our interest here is fiscal management, we will look at the comptroller's office as it functions within the organization. Exhibit 2-11 represents a responsibility diagram for the fiscal management portion of the NOVA organizational chart.

EXHIBIT 2 — 11 Financial Functional Organizational Chart for NOVA



Another way NOVA decided to look at financial responsibility was using a matrix arrangement. The matrix is a guide to obtaining information. If the CEO wanted to know, for example, who to talk to about payroll, the matrix (see Exhibit 2-12) would indicate two distinct levels of responsibility for that particular function. Payroll is a function of the Bookkeeper I with the comptroller as a secondary source of information. The matrix is an alternative way to present a responsibility diagram so that there is little or no role/responsibility confusion.

EXHIBIT 2 — 12 Matrix Financial Responsibility Chart

RESPONSIBILITY / POSITION	Approve budgets	Approve purchasing	Arrange external audit	Bank relations	Change fund	Check signing	Checking endorsements	Credit management	Develop 5 year plan	Internal audit	Inventory checking	Journals	Ledgers	Monitor all ratios	Monitor 5 year plan	Monitor receivables	Monthly financial statement prep.	Overall budget development	Payables review	Payroll	Payroll verification	Petty cash	Procedures manual	Process donations	Program budget preparation	Purchasing systems	Ratio analysis report	Receivables write off	Requisition approval	Review accounting procedures	Review fixed assets	Review ratios	Risk protection package				RESPONSIBILITY / POSITION
CEO	O	X		+	+	+	X	X	O	+	X	+	+	X	O	+	+	X	+	+	X	+	+	+	+	+	+	O	+	O	O	X	+				CEO
Comptroller	-	-	O	X	+	O	O	O	-	X	-	+	+	O		+	X	O	X	+		+	X	+	O	+	X	-	-	-		O	X				Comptroller
Receivables Clerk																X	O					X		X													Receivables Clerk
Bookkeeper I					X							X	X				O		O	X	O					X											Bookkeeper I
Finance Committee	X		X	/	/	/		/	X	/	/	/	/	/	X	/	/	/	/	/		/	/	/	/	/	/	X		X	X	/	/				Finance Committee
Production Coordinator		O							O		O							O			X		O		X			X									Production Coordinator
Rehabilitation Coordinator		O							O		O							O			X		O		X			X									Rehabilitation Coordinator

RESPONSIBILITY CODES

X Actually Doing
O Assist in Doing
\+ Supervising
\- Consultation
/ Oversight & Policy Information

Under the current organizational structure, the CEO has primary responsibilities for all financial operations; the authority of the CEO is unchallenged. The finance committee and board are responsible for policy setting and oversight. The comptroller's office provides a highly technical support system designed to create an upward flow of material and accurate information to the CEO as well as maintaining all of the appropriate records of transactions. A great deal of expertise in fiscal concerns is required of the CEO for the system to be functional. An important aspect of the organizational structure for NOVA lies in the budgetary function, or more specifically, who has control over it. The facility uses a Management By Objectives/Zero Based Budgeting process which places the comptroller's office in a consulting role with expert influence but relatively little authority. The rehabilitation and production coordinators prepare their own plans and decision packages according to the format designed by the comptroller. These plans or packages are reviewed by the CEO and prioritized. The finance committee has final approval over all budgets.

Exercises

1. What is the purpose of cash flow management?

2. What are the variables that impact on the organization of financial management functions?

3. Who is responsible for financial management in a rehabilitation facility? Explain.

4. Describe an appropriate organizational structure in a situation where the board of directors is the entire corporate entity and is responsible for all financial functions of the entity.

5. Using the fourteen specific financial management functions deemed necessary for any entity, assign their responsibility to the following members of the board of directors.
   a. President

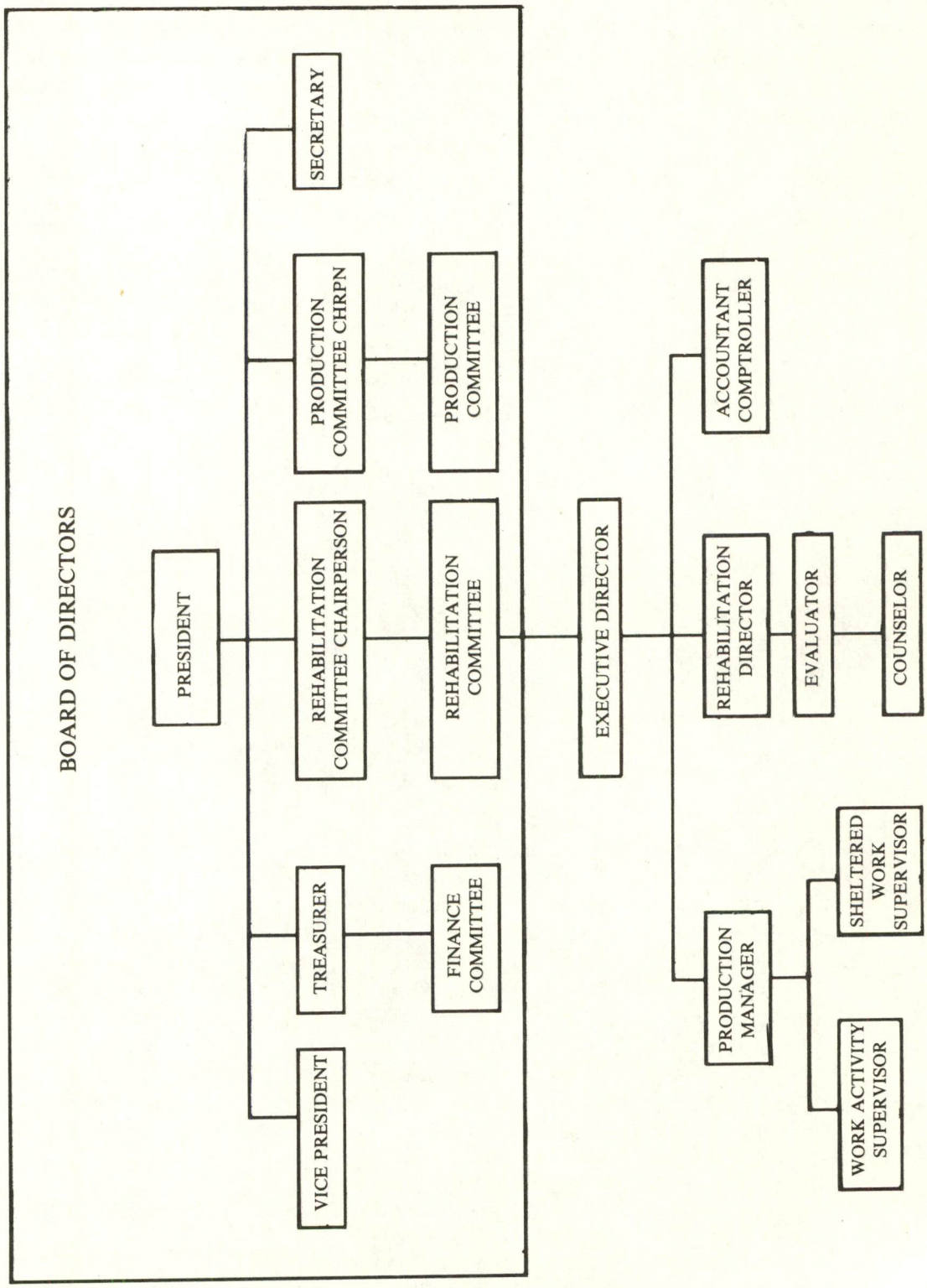
   b. Secretary/Treasurer

   c. Finance Committee

6. Assuming the employment of an executive director to manage the small local Association for Retarded Citizens, for what specific financial management functions would this position be responsible?

7. Describe the responsibilities and potential problem areas for the CEO in the facility described in the attached organizational chart and discuss potential stress points which would likely occur as the organization grows.

Organizational Chart Corresponding to Exercise Number 7



Answers to Exercises

1. Insure that cash is available when needed to meet present obligations and to insure that cash in excess of that immediate need is available for investment where possible (see page 11). See Chapters 3 and 6 for a more detailed analysis of cash flow projection and analysis.

2. Legal basis of the entity

   Stated purpose, mission and goals

   Size

   Complexity

   Frequency of certain types of events

   Board of Director's orientation

   Qualifications of staff

   Provide other variables that might impact on your organizational structure

   (See page 12)

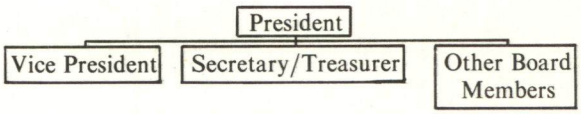
3. Financial management is ultimately the joint responsibility of the owner and chief executive officer (CEO).

   The owner in a not-for-profit rehabilitation facility is the board of directors who acts as the agent for the public funds used in operating the facility. Poor financial management resulting in decreased services or eventual insolvency is a violation of public trust and will result in a greater loss to the owners/investors than to the creditors of the organization, not to mention the withdrawal of a much needed service. A board usually chooses a finance committee comprised of members selected for expertise and experience. They act for the board in reviewing and often times providing final approval of the budget, audits, fixed asset planning, and financial analysis.

   The board employs a CEO to act as its agent in the day-to-day operation of the organization. The autonomy of the CEO is often related to the board's view of the CEO position. Ideally, the CEO makes decisions on matters which have short term impact (one year or less) and the board deals with the longer range policy issues. The CEO is responsible for budget and financial variance in operations and should have the authority to develop controls and make decisions regarding financial management within board established policy.

   The facility may employ a comptroller or business manager to assume responsibility for daily financial operations. This would include accounting practices, monitoring functions, internal/external reporting, budgeting, cash control, and receivables/credit management. The CEO extends the responsibility but not the total authority for financial management to this position. It is sometimes considered in a triad of responsibility for fiscal administration (see pages 11-15).

4. This would be a small corporation which does not employ paid staff.



   The total responsibility for fiscal affairs is maintained within the board. The president assumes much of the authority and responsibility of a CEO while the treasurer handles the actual finances (see page 13).

5. President - has the ultimate responsibility to insure that the board operates smoothly. Delegates responsibility to others on the board. Simply responsible for the total financial management of the organization. Guides the board decision making based on information provided by a variety of sources on risk management, financial policy, and acquisition of assets.

   Secretary/Treasurer - custody of assets such as cash, securities, and fixed assets. Bank relations policy and credit management.

   Finance Committee - financial planning, audits, fixed asset planning, and budget approval (receivables management, payable management, ratio analysis). (See pages 12-13.)

6. Monitoring risk management package

   Budget development

   Donor relations

   Bank relations

   Security of assets

   Financial accounting monitoring

   Cost determination monitoring

   M.I.S.

   (See page 14)

7. Under this system, day-to-day functions are delegated to paid staff. The voluntary board assumes a policy setting, review, approval and oversight function. The CEO bears the responsibility of financial administration of the organization's assets with the assistance of a position (accountant/comptroller) designed to alleviate role strain created by lack of expertise and time. The CEO supervises and controls financial management through delegation to the accountant/comptroller. The accountant/comptroller assumes a position with expert power but ultimate authority and control rests with the CEO. The naive CEO, however, may see some control slip away to the accountant/comptroller due to lack of expertise or training. This creates a potentially unhealthy organizational relationship. The CEO must be prepared to maintain control while utilizing the acquired expertise of the accountant/comptroller position to upgrade the financial management of the facility. To the extent that the CEO can interact with the accountant/comptroller as a colleague, the opportunity for the development of trust and mutual give and take so important for effective management is enhanced.

In the organization presented, the payroll functions expand with the number of staff and control becomes critical. Purchasing is expanded and a system must be designed for efficient and effective control. Monitoring of asset utilization and liabilities becomes a monthly activity. Increased staff means a higher quality compensation package, and in all probability, the need for a more comprehensive risk protection package. Adoption of a Management Information System is a likely necessity. The budget function expands along with the planning function. Relationships with banks, donors and investors become critical. Accounting evolves from a purely cash system to an accrual basis with the establishment of certain funds and the development of more sophisticated methods of cost analysis. It becomes necessary to monitor financial status using trends, ratios, and budget variance analysis (see pages 14-15).

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Argenti, J. *Systematic corporate planning.* London: Thomas Nelson, 1974.

Bittel, L.R. (Ed.) *Encyclopedia of professional management.* New York: McGraw-Hill, 1978.

Moore, R.F. (Ed.) *AMA management handbook.* New York: American Management Association, 1970.

FISCAL CONTROLS: INTERNAL AND EXTERNAL

Once a facility has organized and assigned responsibilities for its financial management functions, probably the next most important fiscal function the rehabilitation facility performs is safeguarding its financial resources through a series of internal and external controls. In fact, the organization of the financial management functions and assignment of specific responsibilities can be viewed as the most basic and necessary step for developing any meaningful system of controls—it is difficult to safeguard something unless responsibility for it is clearly fixed. It is estimated that industry in the United States loses $75 billion annually due to lack of appropriate fiscal controls. Worse, management tends to view this as a problem which only effects the other guy and the other company (Miller, 1980).

While a review of related literature located no specific studies or estimates for such losses in the rehabilitation facility industry, there is little reason to believe it is any less a problem. The same situations exist in rehabilitation facilities as industry, including personnel problems and opportunities for misuse of funds. In rehabilitation, there appears to be a lack of appreciation among practicing executives for these potential problems (Gross & Warshauer, 1979). The lead author is reminded of a class he taught a few years ago on financial management for practicing executives of rehabilitation facilities. During the session on financial controls, an executive made a strong case for giving each supervisor a checkbook so they could purchase what they needed, when they needed it, and thereby improve the shop's efficiency. The most amazing part was that several other executives in the class thought the idea had merit.

We need to reach an understanding of the need for internal and external controls to properly safeguard the facility's financial resources. Until then, discussion of more sophisticated aspects of financial management functions would be premature. The purpose of this chapter is threefold: 1) to examine the basic principles of internal control necessary in a rehabilitation facility; 2) study the types and functions of audits (the primary method of external control); and 3) review preparation for an audit, identifying the most frequently cited audit opinions concerning inadequate internal controls, and propose some solutions. This is followed by a case example designed to illustrate the aforementioned points. Finally, a practice exercise is presented which provides an opportunity for the reader to apply the concepts presented. After completion of this chapter, the reader should be prepared to deal more effectively with issues of internal and external control from a management perspective in a rehabilitation facility.

Principles of Internal Control

In order to provide even the most rudimentary level of financial management in a rehabilitation facility, it is essential that management assure that assets are properly protected from the time they become due to the facility (revenues) until the time they are utilized in the operation to accomplish the facility's objectives (expenses). To accomplish this, it is essential that a system be developed which provides for the proper custody of assets, protection of receipts, control of disbursements, and controls for fraud in all aspects of the operation (National Accreditation Council, 1976).

Custody of assets. If we examine the left side of the balance sheet (see Exhibit 3-1) for any rehabilitation facility, we have a listing of the assets which must be safeguarded for that facility. Moreover, those assets are typically listed from the most to least liquid, that is, readily convertible to cash and thus expendable with relatively little trace. Each group of assets presents a different set of problems which must be considered to provide adequate safeguards.

Control Principle 1: The protection of liquid assets should be governed by clear policies and procedures concerning the documentation

and safeguarding of such assets held by the facility.

Obviously, the most liquid of the assets is cash. It can be spent by virtually anyone simply as a function of it being in one's possession with no record of the transaction. For this reason, only as much cash should be kept on the premises as is necessary to accomplish the specific mission of the facility.

Generally speaking, the only cash which should be on the premises would be funds in support of sales operations, collection functions, change funds, and petty cash funds. Each of these funds should be kept as low as possible yet adequate to efficiently accomplish the intended purpose. Funds should be kept in a secure container when unattended and be under the constant control of a responsible employee when not in that secured container. Opening and closing procedures, responsibility for the fund, deposits of excess cash, and provision for the periodic review of funds by a disinterested second party should be established as facility policy. All other cash, and cash in excess of the requirements for these funds, should be deposited, at least daily, into an appropriate bank account.

Checks, when properly drawn, are the second most liquid form of asset. It is essential that the facility's checks be serially numbered, that only appropriate personnel be authorized to sign such checks, and only upon execution and approval of an appropriate voucher. The checking account should be reconciled monthly by someone other than the person who issues the checks. The check book and blank checks should be kept in a secure container and access limited to appropriate personnel.

The third category of liquid assets, including stock certificates, bonds, and mortgages, should be maintained in an appropriate secured container. Separate records of such holdings should be maintained at an alternate location.

The least liquid of the current assets are the receivables and prepayments. Receivables, either accounts or pledges, should be appropriately documented. Every prudent method should be made to collect them, and there should be a clear procedure for evaluating receivables in terms of collectability based on facility

EXHIBIT 3-1
Sample Balance Sheet Facility Year
December 31, 19__

ASSETS		LIABILITIES AND FUND BALANCE	
Current Assets		Current Liabilities	
Impressed* Cash	$ 100.00	Accounts Payable**	$15,455.55
Cash in Bank	8,218.29	Accrued Salaries	7,500.00
Marketable Securities	4,528.16	Withholding Taxes Payable	2,776.92
Accounts Receivable	34,260.18	Loan Payable Credit Union	3,020.92
Pledges Receivable	10,007.18		
Prepaid Expenses	3,021.00		
Supplies Inventory	1,056.28		
Raw Material Inventory	5,257.88	Total Current Liabilities	$28,753.39
		Long Term Debt	
Goods in Process Inventory	5,033.00		
		Bank Notes Payable	$150,302.30
Finished Goods Inventory	10,250.00		
Total Current Assets	$ 81,731.97	Total Liabilities	$179,055.69
Fixed Assets			
Land	$ 56,200.00	Fund Balance	$ 98,020.25
Building	37,300.00		
Building Improvements	117,322.86		
Equipment	36,500.00		
Total Fixed Assets	$247,322.86		
Less Allowances for Depreciation	51,978.89		
Total Fixed Assets	$195,343.97	Total Liabilities and	
Total Assets	$277,075.94	Fund Balance	$277,075.94

*Funds maintained on the facility premises for petty cash, change, collection and sale.

**Includes this year's portion due to Bank Note Payable.

experience. Adequate safeguards for writing off uncollectable debts, accurate records of prepayments, and their utilization should be maintained and periodically reviewed by a disinterested second party.

Most other assets carried on the balance sheet are generally referred to as fixed assets.

Control Principle 2: The safeguard of fixed assets should be governed by clear policies and procedures concerning accurate records of and physical security for inventories and maintenance of appropriate risk protection.

Inventories can include supplies, raw materials, goods-in-process, finished goods, equipment, and land and buildings. Such assets require an accurate listing and valuation, physical security (for example, security guards, restricted access storage), and periodic physical count of the items to determine discrepencies. The frequency of such counts should be at least annually unless the potential for loss of pilferage of the items is great, in which case the count should be taken more frequently.

The facility should have an adequate risk protection program designed to compensate for the loss of the asset if the other internal controls fail. The risk protection program should consider the potential for loss, the cost to replace, the cost to insure, as well as the percent of coverage. The risk protection program should be managed by a responsible employee and subject to periodic review by the governing board.

Protection of receipts. Accountability for receipts must be established at the earliest practical point in the process, for example, the cashier in a retail sales operation or the mail opener in the business office.

Control Principle 3: The intake of and accountability for receipts should be governed by clear policies and procedures concerning documentation and protection of intake of assets.

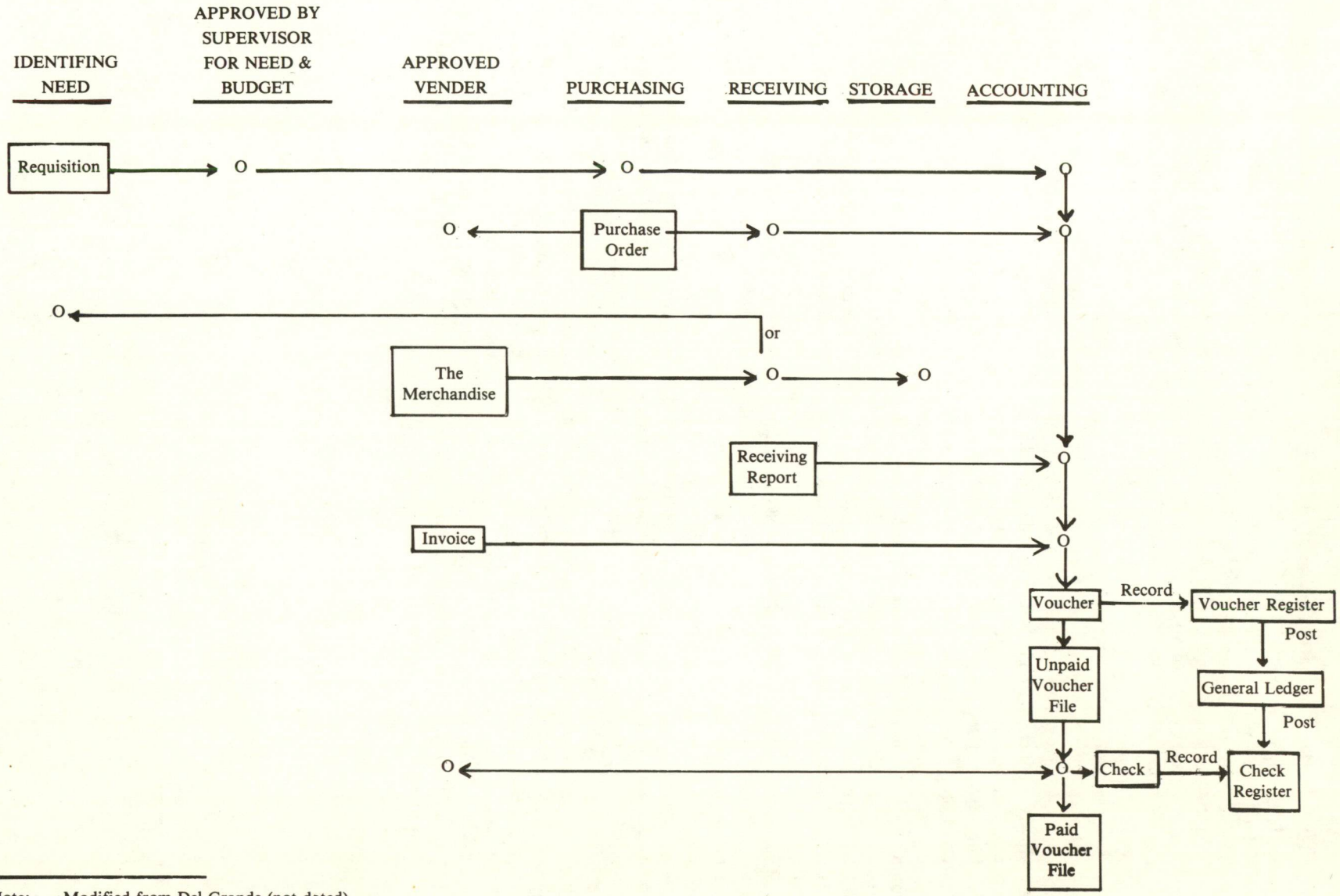
All receipts must be promptly recorded either by machine or hand and subject to daily review by a second person. Serially numbered receipts documenting their payment to the payor should be issued for all revenues and a copy kept by the facility. This practice should be made well known to persons doing business with or making donations to the facility. Lastly, a policy and procedure should be established to utilize available cross checks to verify, on a regular basis, that receipts are promptly and accurately recorded and then deposited intact. Checks should be restrictively endorsed "for deposit only" immediately upon receipt. These should also be deposited intact daily. The bank should be instructed not to cash checks made out to the facility directly. Rather, checks should be deposited only into appropriate accounts of the facility.

Control of expenditures. All expenditures should be promptly and accurately recorded. Moreover, there should be clear authority established for any expenditures by position and budget.

Control Principle 4: Facility expenditures should be governed by clear policies and procedures concerning documentation and protection of release of assets using both a voucher and budget system.

The voucher system should include, at a minimum, a requisition, a purchase order, a receiving report, an invoice, a voucher, and a check, with all the necessary registers and document files. Persons authorized to approve each document should be clearly established and their responsibility to check the proposed expenditures against the approved budget well established. An example of such a system is contained in Exhibit 3-2.

EXHIBIT 3 — 2 Essential Elements of a Purchasing Payment System



Note: Modified from Del Grande (not dated)

The system is purposely designed with several redundancies to allow for verification of computation, cross-checks to identify fraud and assure appropriate management controls. The only expenditures exempt from these procedures should be petty cash and payroll. Use of petty cash should be restricted to an absolute minimum necessary to accomplish the mission. Moreover, it should have a single fund custodian, require advanced approval by designated personnel with budget authority, require appropriate documentation of purchase, and have clear limitations set as to the amount and type of expenditures permitted.

Payroll frequently represents 70-80 percent of the expenditures in a rehabilitation facility. At a minimum, there should be clear documentation of time worked, and the rate of compensation and the terms for payment. Clearly established and approved in advance, payments for work performed should be carefully checked by at least three persons—the supervisor verifying time worked, the payroll clerk who calculates actual pay and authorized deductions, and by a responsible facility official authorized to approve payroll disbursements. All payments should be made by check unless cash payment is *absolutely essential.* In such a case, a receipt voucher should be signed and witnessed. Adequate safeguards of the cash against robbery and loss should be used.

Protection against fraud. Some executives find certain principles of fraud control offensive; the use of such controls can be perceived to reflect a distrust of employees in certain positions.

Control Principle 5: Protection against fraud should be governed by clear policies and procedures which protect employees.

Internal control procedures provide safeguards for employees involved in financial management. Most employees prefer these types of protections. These safeguards should include investigation of the background of persons occupying positions of trust and the establishment of appropriate bonds with fidelity coverage for all persons in such positions. To the extent possible, there should be a complete separation of those duties which involve custody of assets, keeping accounting records, and the authorization and approval of specific transactions. Some specific procedures which will aid in fraud control are as follows:

1. Mail should be opened by two persons. Cash receipts should be documented by both parties and verified by someone independent of both mail openers and the cashier.
2. Incoming checks should be immediately endorsed "for deposit only."
3. Banks should be instructed to accept checks made payable to the facility for deposit only and never surrendered for cash directly.
4. Donations and pledges should be acknowledged by serially numbered receipts which have carbon copies. All entries should be regularly verified by a second party using deposit slips.
5. Write-offs of uncollectable receivables (bad debts) should be accomplished by an official or committee of sufficiently high rank, independent of the cashier and the accounting staff to provide adequate safeguards against collusion.
6. Checks and purchase orders should be serially numbered and properly accounted for by number by a person not authorized to prepare checks or purchase orders. Access should be limited to only those personnel who have need for such access in the performance of their job.
7. The person signing the check should review it against the voucher and supporting documentation prior to signing.
8. Bank statements and cancelled checks should be reconciled by an independent party, be received directly by the CEO, and all signatures should be reviewed regularly by the person responsible for the reconciliation.
9. Petty cash should be periodically reviewed by a disinterested party.

System maintenance. The governing board should regularly review its system of internal controls to assure that it is operating as designed and that the system is adequate for the present facility circumstances.

Control Principle 6: The day-to-day operations should be governed by clear policies and procedures, subject to periodic review by the governing board.

At a minimum, policy and procedure should include the authorization and assignment of every position responsible for some aspect of internal control. Lastly, the governing board should obtain the opinion of a Certified Public Accountant (CPA) annually as to the adequacy of the internal control system (an external audit).

Audits: Types and Functions

An audit, according to Bittel (1978), is an objective investigation to validate the representations in financial statements by obtaining reasonable assurance of the integrity and reliability of the underlying accounting system. Thus, it might be said that an audit is an objective review of the facility's internal control system to assure that the financial statements accurately reflect the true financial condition of the facility. An audit consists of an entry interview with the appropriate parties from the facility and the auditor(s), an examination of the records

and procedures of the facility employing a number of tests to authenticate the documents and records, an exit interview to discuss the preliminary audit findings and afford the opportunity to correct errors in the audit findings. An audit report contains an opinion by the auditor about the facility's system for accounting, internal controls, and financial reports. It provides a set of financial statements which, in the opinion of the auditor, reflect the true financial condition of the agency, and notes any exceptions. Audit exceptions are submitted to the position or body that authorized the audit. Since the audit is conducted against generally accepted accounting standards (AICPA, 1967), the fiscal policies of the facility and its funding sources, exceptions are generally reported in relation to those standards and policies.

There are several types of audits, each serving a slightly different function. The most common type of audit used by rehabilitation facilities is that conducted by a Certified Public Accountant (CPA). This type of audit is generally obtained by the governing board annually from a person certified by the state to conduct such audits. The audit is paid for by the facility to verify the facility's accounting system, the true financial condition, and system of internal controls.

A more recent type of audit used in rehabilitation facilities is known as a funding source audit. The funding source audit may include a financial audit, program audit or both. In any case, the funding source appoints an auditor (usually from its own staff) to examine the financial and/or program transactions of the facility to assure that the facility provided the services it said it would, obtained the agreed upon outcomes, and used the money for what it said it would in compliance with the funding source's policies and procedures.

Another type of audit, growing in popularity for larger facilities, is the internal audit. Such audits are performed by persons within the facility who have this type of job assignment. Such audits are performed on sub-units of the facility to determine compliance with the facility's fiscal policy and the adequacy of their financial reports. Such audits provide management with important data about operations on a more regular basis than the aforementioned types, and allow for corrective action prior to the identification of problems by an external source.

Audit Preparation and Most Frequently Cited Exceptions

The best way to prepare for an audit is to begin with the first day of operations to assure that the facility is operating in compliance with its own policy and procedures, those of the funding source, and those generally accepted accounting standards used by auditors. This involves 1) adhering (at a minimum) to the internal control procedures; 2) adhering to the principles of conservatism, materiality, consistency and full disclosure in preparing facility financial reports; and 3) having the CEO and board periodically review/check all aspects of the facility's internal control system.

Since we have already discussed the essential ingredients of the internal control system, we will not repeat them here. However, it would seem to be of some value to review the most frequent audit findings cited in not-for-profit rehabilitation facilities relative to internal controls and to note ways to avoid them. The findings can be grouped into three categories: those related to receipts, those related to disbursements, and those related to other aspects of internal controls. Specific areas of concern are as follows:

1. Audit findings related to revenues
   a. Failure to use prenumbered carbonset receipts to acknowledge donations: This increases the potential for someone retaining a donation for personal use and still being able to give a receipt to the donor with no one knowing. When prenumbered carbonset receipts are used and requirements established to account for all such receipts used, unused, and voided, this potential abuse is seriously curtailed.
   b. Failure to have at least two persons opening mail and handling cash collections: The problem is that when cash is received in the mail, it can easily be taken for personal use with no real opportunity for control or accountability. The use of two persons affords some measure of control for the operation and protection for the employees involved.
   c. Cash and other liquid asset receipts are not deposited on a timely basis: Failure to do so increases the risks related to physical loss and reduces the potential for interest earnings on surplus cash or reduction of interest costs for short term loans. A clear policy and procedure should be established that requires and assures that receipts are deposited intact on a daily basis or more frequently if the volume warrants.
2. Audit findings related to disbursements
   a. Failure to make all disbursements by check: The greatest single control in a rehabilitation facility is the payment of all disbursements by check. Such a procedure assures an adequate audit trail, and provides a series of checks and balances coupled with appropriate levels of review and approval. This requires the use of a voucher system and clear authority for each level of approval in the process.

b. Checks do not require two signatures and have not been countersigned: Auditors prefer to have checks countersigned by two responsible staff, or a staff member and a board member. While this affords some measure of control, it is often abused by having one of the signers presign the checks. Such a practice is really no control, although it may appear to improve efficiency. A reasonable compromise is to establish the requirement for countersignature only on checks over a predetermined amount, for example, $500.00. This reduces the likelihood of presigning yet places controls on those expenditures where abuses would be most lucrative and, therefore, most tempting.

c. Bank statement reconciliations are handled by the same person who handles disbursements: This practice provides a significant opportunity for abuse since checks can be issued to bogus parties and not detected. The person reconciling the statements should be someone other than a person with responsibility for disbursements and include a review of the endorsement on the cancelled checks so that real controls are established.

3. Audit findings related to other aspects of internal controls

a. The write-off on uncollectable receivables is performed by a person with responsibility for record keeping: This practice increases the likelihood for collusion between the staff member and the debtor. The write-off should be performed by a person(s) not responsible for the record keeping functions, and sufficiently high level not to be unduly influenced by others in the organization. To the extent possible, write-off should be performed by a committee of staff and/or board. This practice provides for increased accountability because it makes a quasi public function of it, thereby reducing the possibility of concealing an act of collusion and increasing the response cost (public disclosure) for failure to pay just debts.

b. Marketable securities are kept in a file cabinet: These securities have similar qualities to cash and require similar levels of protection. As such, they should be kept in a safety deposit box or in some other type of storage with comparative security. An inventory list of these securities should be kept at a location other than the safety deposit box.

c. Inventory is not checked physically on a regular basis: Unless such checks are performed on a routine basis it is possible that certain items of equipment may simply vanish. Physical checks and security investigations may help minimize these losses.

d. Excess cash in restricted funds is not subject to adequate controls and thus become large targets for abuse: The most frequent type of abuse is to use these funds for personal, unsecured loans without interest. In most cases such activities are illegal and, worse, when the funds are needed they often are not available to be paid back. Very rigorous controls should be established to protect these funds and the future potential grant-getting capability of the facility.

e. Selected personnel in accounting put in excessive overtime, which of necessity, requires them either to be alone in the accounting department with access to records, or causes them to take the records home. Moreover, these personnel seldom take an extended vacation which precludes another employee from assuming responsibility for that job for short periods. Such practices provide selected employees with significant opportunities to alter records and prevent other employees from identifying questionable practices and records. All employees with significant financial responsibilities should be required to take periodic vacations so other employees can temporarily replace them. Overtime in the accounting department should be limited; at least two persons should be present in the department during such times. Facility accounting records should not be taken out of the facility to be worked on in an employee's home (Gross & Warshauer, 1979).

In addition to assuring the above controls for audits, another consideration has to do with preparing financial reports as objectively and accurately as possible.

To the extent that subjective judgements must be made to estimate the value of transactions, the following principles should be adhered to:

1. Conservatism: When there is a need to estimate a value, it should not be overly optimistic. In other words, if we have to be wrong, it should be in our favor.

2. Materiality: If there is a question whether an item should be included in the financial reporting system, the issue should be—Is this material critical or crucial to the understanding of the financial operation. If so, it should be reported.

3. Consistency: Similar events should be reported in a similar fashion to allow for maximum historical comparison.

4. Full disclosure: Reports should present information in a fashion understandable to a lay person, and accurately reflect the true financial condition of the facility.

Chief Executive Officer's Role in the Audit

The Chief Executive Officer (CEO) should be present at both the entrance and exit interviews of the audit. During the entrance interview, the CEO should listen carefully to the audit plan and resources needed by the auditor(s) to conduct the audit. Based on that information, the CEO should assure that the facility will cooperate as requested to allow for completion of the audit in a timely and accurate fashion, for example, provide necessary records, office space, and technical consultations by appropriate staff. During the audit, the CEO should interface with the auditor(s), remaining available to answer questions and to assure that needed resources are provided. During the exit interview, the CEO should be prepared to correct erroneous conclusions, and answer questions or obtain necessary additional information requested by the auditors. If the auditor(s) identify a *questionable* practice which, in the opinion of the CEO, is justifiable, nothing is lost by objecting to the auditor's conclusion and providing additional data. In some instances this may cause the auditor to correct or modify the report in favor of the facility. If not, the CEO should remember that the actual decision of what to do about the practice is outside the domain of the auditor and rests in the hands of the entity which obtained the audit. In the event that the auditor identifies a practice which is *clearly in error*, the CEO should immediately acknowledge the error and seek the auditor's counsel for correcting it.

Example

Once NOVA Industries identified and organized its fiscal management functions, clear responsibility for each financial function was assigned to specific positions. Not very long after that, those persons with new responsibilities recognized that some internal controls would have to be established if they were going to realistically execute those responsibilities. The matter came up at an administrative staff meeting. All present were quite surprised, and to some extent relieved, that others shared similar concerns. The CEO decided that some actions would have to be taken after he consulted with the board.

The board had similar misgivings in that they had just received the results of their annual CPA audit. They were somewhat dismayed at the number, scope, and seriousness of the citations and recommendations provided. The fact that the Division of Vocational Rehabilitation had just scheduled a simultaneous program and fiscal audit in two months was also on their minds. Several members had, over the course of the past month, discussed their concerns over the lack of adequate fiscal controls at NOVA and their potential liability as board members if no corrective action was taken.

Thus, when the CEO brought up the matter of internal controls at the next board meeting, it did not take long to determine that there was a problem related to internal fiscal controls at NOVA which was of concern to staff and board alike. It was unanimously decided to form a study committee composed of the CEO (chairperson), comptroller, chairperson of the board finance committee, and the production coordinator (who was responsible for physical security). The committee was charged with the responsibility to review the audit findings, current policies, procedures and practices, and to correct the problems thus identified.

The committee, after careful but prompt study, determined that problems could be grouped into four major areas of concern: custody of assets, protection of receipts, control of disbursements, and other methods of fraud protection. As a result of their indepth study and recommendations, the following specific actions were taken.

Custody of Assets

Physical security. Security of the organization's physical assets was overlooked by the previous administration. The study committee considered this to be a vital part of the control system necessary for the protection of NOVA. A private security firm was contracted to observe and provide protection during nonworking hours. They were made aware of the cash and other assets that remain in the building at night, and the type of inventory kept inside the fenced enclosure and in the storage building. Staff members were assigned specific internal security responsibilities on a daily basis. These responsibilities included the following:

1. Assurance that the building was vacated by unauthorized personnel prior to closing.
2. Shutting and locking windows, doors, and gates, and
3. Locking vehicles

Initialed check sheets were used to assure staff compliance with responsibilities. The material inventories, such as raw materials, work in process, finished goods, and supplies, were located in physically secure areas of the plant or external sites. Accountability for these inventories was established through carefully kept records as to the amount and type of inventory, and a requisition system established to control outflow. Access to these inventories was limited to the management staff and each placed

under the supervision of a responsible employee. All inventories were in areas which also assured useability based on the type of storage to maintain quality. All marketable securities were protected in a safety deposit box. Access to this box was limited to authorized and bonded staff, and board members. A separate listing of the contents of that box was placed in a separate, locked file cabinet. The facility obtained a safe for protecting receipt books, account books, petty cash, change funds, and other valuables such as insurance policies and special documents. Only authorized, bonded employees were given, and required to memorize, the combination to the safe. The only written combination was kept in the facility safety deposit box. As an additional safeguard of the organization's assets, the study committee suggested that the production coordinator organize a Safety and Security Committee with a modest budget. That group developed a safety and security check to be performed each day, and initiated a safety and security checklist to be completed quarterly. They used their budget to sponsor fire suppression training, first aid training (including CPR), and a safety consultant. This committee developed and tested the emergency procedures for safe evacuation during a fire, and other emergencies. A risk insurance package, appropriate to the size of the organization, was established, to be reviewed by the board annually for its completeness of coverage. Depreciation, appreciation of assets, and inflation were to be considered in reassessing the package. The risk insurance package covered the following:

1. Vehicles,
2. Buildings and land,
3. Workmen's Compensation,
4. Officer error and omissions,
5. Malpractice,
6. Major medical coverage and supplemental life policy for employees,
7. Equipment and inventory,
8. Bonding, and
9. Product and service liability.

Petty cash fund. Petty cash was found to be a necessary resource for special occasions when small purchases were needed, and when immediacy was a concern. It was determined that it would not be efficient to use the voucher system for small, nonrecurring purchases. The study committee decided not to use incoming daily receipts of cash from donations to support petty cash. The fund was started by the voucher system and authorized by the board.

Guidelines for petty cash were set as policy by the board. The guidelines were as follows:

1. $50.00 was established as the amount to have on hand; not enough to encourage theft but enough to handle daily requests.
2. The assistant bookkeeper was assigned as fund custodian, the person to have control and responsibility over the fund.
3. A receipt system was established using prenumbered multicopy carbonset forms. Signatures of the authorizing person and the agent requesting the money were required.
4. Clear, written policies were established for the exact purposes these monies could be used.
5. Daily reconciliation, assuring that the amount of cash plus receipts always equals $50.00, was required by the fund custodian. Review by a disinterested second party was required monthly.
6. The actual petty cash fund was to be locked in the facility safe at night and when not under the direct supervision of the fund custodian.
7. The voucher system was used to replenish the petty cash fund with the receipts for payments made serving as the necessary documentation.

Change fund. The facility has several vending machines for the convenience of clients and staff. The work adjustment program and the residential facility both have coin operated washers and dryers for client training. A change fund was established for circumstances where change was needed. The following guidelines were set for this area of potential slippage:

1. $25.00 in change was set as the amount to have in hand at all times.
2. The work adjustment counselor was assigned control and responsibility for the money.
3. It is a self perpetuating fund that always has $25.00 in it regardless of the denomination. The change fund was started by voucher with CEO approval. Since no expenditures are to be made from the change fund, no receipts are necessary.
4. Clearly written specifications limiting the use of the fund for making change were established.
5. Daily reconciliation of the fund was the responsibility of the fund custodian. Review by a disinterested second person was required monthly.

Protection of Receipts

Mail and in-person payments. NOVA receives approximately 8 to 14 percent of its annual revenue from individual philanthropy. This resource arrives by mail or personal delivery. Previously, no formal safeguards existed to assure that these funds were actually made available to the facility for use through deposit in the facility bank account. Many payments in relation to receivables were also received, the amount of which was often a considerable sum. The study committee decided to establish a system whereby responsibility and accountability were clear. Written policies and procedures were established as follows:

Payment Received by Mail

1. Two people always open the mail. One is responsible for opening the mail and making out receipts, the other for preparing the bank deposit.
2. Each check is immediately stamped "for deposit only-NOVA." Cash and checks are separated from other mail.
3. A prenumbered, multicopy carbonset receipt is prepared with the original sent to the payor and the copy kept by the facility.
4. A letter of acknowledgement and thank you is prepared (for donations only).
5. Cash or check amount, date, and source are entered in cash receipts register.
6. Cash and checks are given to the comptroller daily with receipt book for cross-check.
7. Receipt books are kept in the safe overnight.
8. Total receipts are deposited intact in the facility bank account daily.

Payment Received In-Person

1. The cashier receives all in-person payments whether for account receivables or donations.
2. The actual handling of the cash, the stamping "for deposit only-NOVA" on checks and the completion of the receipt is witnessed by the payor.
3. A prenumbered, multicopy carbonset receipt is prepared with the original given to the payor and a copy kept by the facility.
4. The person's/organization's name and address are taken for the letter of acknowledgement and thank you.
5. Cash or check amount, date, and source are entered in cash receipts register.
6. Cash and checks are given to comptroller daily with receipt book for cross-check.
7. Receipt books are kept in the safe overnight.
8. Total receipts are deposited intact in the facility bank account daily.

Donated goods, materials, equipment and other assets also require a receipt. The quantity and type of the donated item(s) are included on the receipt along with the donor's name and address. A letter of acknowledgement and thank you are required in these cases. A board policy established that deposits of all cash/checks received by the facility would be made each day of operation and a person from the comptroller's office would prepare the daily deposit. A designated employee deposits all NOVA cash/checks intact. The bank agreed to call each day to confirm the previous day's deposit and the amount. Moreover, it was agreed that random deposit times would reduce the probability of theft.

Retail sales. The CEO and Board of Directors of NOVA Industries are contemplating an expansion of the facility to include a retail outlet store which would provide jobs and training for clients. This new operation would also create new areas of concern for cash control and protection of receipts. In anticipation of this endeavor, the study committee submitted the following recommendations to the board:

1. A standard opening amount of bills and change will be in each cash register drawer at the start of each business day. That amount should not pose serious security problems, but assure efficient operations for the cashier.
2. The cash registers should produce an intact tape with a clear record of all transactions. A system should be available to distinguish the individual who entered the sale on the tape, and the type and cost of the item.
3. A void procedure requiring the floor supervisor's approval should be established.
4. Each register should be reconciled daily at closing by someone other than a cashier. The amount in the drawer minus opening amount should equal tape minus voids. When variances occur, they should be brought to the attention of management.
5. Cash and tape reconciliation should be handled by the store manager on recording forms provided for this purpose. The cashier handling the station during the work day will not reconcile the register at night.
6. A clear check cashing policy must be decided upon and adhered to strictly. A separate policy for employee check cashing is also seen as a necessity.
7. It was decided to provide for physical security by locking each register when the station is closed. A safe should be provided if deposits cannot be made at closing.
8. Clearly written procedure for handling robberies should be established and made known to all employees.
9. It is recommended that a security alarm system be installed with cameras, and that a private security firm be responsible for the retail sales location.

Control of Disbursements

Purchasing. To control purchases other than payroll, the study committee recommended the establishment of a purchase order/voucher system, composed of the following elements:

1. List of approved vendors: The facility looked at reliability, prices, discounts, and quality when establishing this list. A system for the comptroller and CEO to adjust and monitor the list was developed.
2. Purchase requisition: Filled out by the person recognizing a need, the requisition should include a number, name of requester, item to be procured, justification, price if available, and suggested vendor. It must be approved and signed by the appropriate program coordinator.

3. Purchase order: Exclusive authority to prepare a purchase order and select the vendor was given to the purchasing agent. Prenumbered carbonset order forms are to be used. The original is sent to the vendor with copies to shipping and receiving, and the comptroller's office. All purchase orders are reviewed daily by the comptroller.
4. Receiving report: Shipping and receiving compares the packing slip/materials received with the purchase order, noting any discrepancies. The receiving report indicates date of delivery and condition, and is signed by the person accepting delivery. The receiving report is not prenumbered, rather, it is numbered by the shipping and receiving department to correspond with the purchase order number.
5. Invoice: This, the only external document in the system, originates with the vendor and arrives with the merchandise or under separate cover. It includes more information than the packing slip and should be compared with the purchase order and the receiving report. Discrepancies are handled immediately by the accounting office. The combination of the requisition, purchase order, the receiving report, and the invoice is the basis for preparation of the voucher. Each invoice will have a separate voucher.
6. Voucher: The essential document to authorize payment, the voucher must be supported by appropriate evidence documents. The voucher and its attachments (purchase order, receiving report, requisition, and invoice) serve as a historical document describing each transaction in detail. It certifies authenticity and authorizes the appropriate accounting entry. Further, it is the basis for writing a check and must, at a minimum, include the following:
   a. Vendor name and address,
   b. Voucher number,
   c. Date,
   d. Date due,
   e. Purchase order number,
   f. Net amount due,
   g. Discount, if any,
   h. Prepared by and signed,
   i. Approved by and signed (must be other than the individual who prepared and signed the voucher),
   j. Date paid, and
   k. Check number.
7. Voucher register: This special subjournal is posted to the ledger at the end of the month. Only transactions supported by a voucher are recorded in the voucher register. Entries are made only by authorized persons.
8. Unpaid voucher file: The voucher and its attachments are filed by due date. Each day, all due vouchers are withdrawn and delivered for payment. The accountant reviews the due vouchers and support evidence, and authorizes payment.
9. Check and check register: An unsigned check is prepared according to the voucher information and presented to the CEO for signature. (Two signatures are needed on items above $500.00.) The CEO reviews and initials the voucher and its evidence before signing the check.
10. Paid voucher file: Once the voucher is paid, the date of payment and the check number are noted on the face of the voucher. The voucher and all supporting evidence are filed by vendor name.

Payroll. Special concern by the CEO and comptroller was given to payroll since it is the single largest expenditure in the agency. Extra effort is needed to assure a high level of documentation and to reduce or eliminate error potential. All special obligations (FICA, Federal and State tax, etc.) must be accounted for and only authorized employees who actually worked should get paid and always at the proper amount. The following are internal controls which should be established for payroll:

1. Payroll is handled in a separate bank account,
2. A payroll register is maintained to record checks drawn on the payroll account,
3. Signature control on checks over $500.00 (or some other respective amount) require two signatures. An automated signature machine is planned and the keys will be carried only by the CEO and the comptroller,
4. Daily time records are maintained by all employees,
5. Clearly written procedures for time documentation, requiring supervisor signature, are in existence,
6. Each individual has a separate pay file and record which lists name, social security number, position, wage rate, authorized withholdings, and obligations,
7. Written policies to establish pay periods exist,
8. The approved payroll list is reviewed regularly by the CEO,
9. Pay files and records are kept for client employees with justification for subminimum wage rates,
10. Payroll is paid only by check, and
11. Written authorization is required for someone other than the payee to pick up the paycheck.

Specific procedures were established at NOVA to handle the payroll. A voucher is prepared for the net amount of the payroll. The check is authorized, signed, and deposited in the special payroll checking account. The checks in payment of the payroll are drawn on the special account. Payroll checks are picked up at the comptroller's office.

Other Internal Controls

Receivables. In the day-to-day operation of the facility's workshop and rehabilitation components, a variety of receivable accounts were established and utilized. Contractors dealing with the workshop most often did not pay cash for finished goods, but preferred those goods delivered and a suitable time allowed for inspection prior to acceptance and payment. That period of time was generally prearranged for each contract during which time the contractor was permitted to delay payment. In the rehabilitation component, most payments for services were from government sources with delays in payment ranging from 60 to 120 days from billing date. The control of receivables was thus an area which was perceived as requiring attention from management. Failure to properly manage accounts receivables can result in serious cash flow problems and increased "bad debts" for the organization. The study committee recommended establishment of a payment policy for production contracts with private operators as net due in 30 days and an interest charge of .049 percent per day for each day thereafter; a 2 percent discount was granted for accounts paid before the 15th day after delivery. Since State law did not provide for interest payments, the facility's policy on state agency receivables was, of necessity, different. The cost to the facility of borrowing money in previous years, due to delayed payments from the State, was computed, with the permission of the funding agency, in the fee-for-service.

A file on all accounts receivable was established and maintained by the comptroller who was charged with the responsibility of reviewing accounts weekly. Receivables were filed by the age of the account. Appropriate follow-up letters and other correspondence were designed by the study committee for use with accounts that fell past due. A system of three monthly follow-up attempts by the facility was established. If, after three months, no payment was forthcoming and no explanation provided, a personal contact by the comptroller was initiated. If this was unproductive, the facility legal council was called in to attempt collection. If the debt was then determined uncollectable, a decision was made to officially "write off" the receivable account. The facility's policy in this matter established that receivable accounts could be written off *only* by the finance committee of the board, upon recommendation of the CEO in consultation with the legal counsel and the comptroller.

Other fraud protections. Fraud control was perceived to be an important function as evidenced by the systems of internal control described above. This effort was bolstered by selecting only qualified, competent, and trustworthy employees. Careful reference checks were required of all persons who would have responsibility for dealing with money, other assets, and records. Moreover, all such employees were covered by a commercial blanket bond, purchased on recommendation of the study committee. The board also established a clear conflict of interest policy for board and staff. The comptroller was charged with the responsibility of conducting limited internal audits of those areas of operation which had a high potential for fraud and other abuse. Reports of these audits were provided to the CEO on a timely basis. Moreover, the facility decided to use the study committee on an annual basis to conduct a review of the internal control policies, procedures and practices, and make recommendations to the board for improvements. Finally, a policy was established to obtain a CPA audit annually by an external firm selected by the board.

Conclusion

NOVA took appropriate action to diagnose and correct potential areas for fraud and other financial abuse. A facility such as NOVA Industries must protect the public trust or place at severe risk its ability to obtain the resources necessary to continue its services to handicapped persons. Such efforts should also result in reduction of loss, thereby keeping costs down and improving cost effectiveness. In doing so, the additional cost of internal controls was covered and more services available to the population being served without raising additional funds. Finally, the board and staff have protected themselves by exercising good financial management practices.

Exercises

1. Based on the principles identified in the first portion of this chapter, review the actions taken by the NOVA Industries study committee and list additional items of internal control which still seem to be lacking.

2. List the recommended steps in a voucher system and indicate how they result in control and accountability of the facility's disbursements.

   a.

b.

c.

d.

e.

f.

g.

h.

i.

j.

3. Describe an appropriate control system for cash receipts obtained by mail.

4. What are the primary controls on the use of checking accounts?

5. How should marketable securities be safeguarded?

6. Discuss the potential for fraud in handling uncollectable accounts receivable.

7. What are the key points in the physical count inventory and asset security procedures?

8. As the person responsible for the financial management of the facility, what steps would you take to manage an adequate risk insurance package?

9. List the important receipt control procedures.

10. How would you assure adequate control of your payroll system?

11. Explain the case for bonding employees who have authority and responsibility for financial operations.

12. What is the role of the board of directors in relation to fiscal controls?

13. What is the purpose of an external audit?

14. What is the purpose of an internal audit?

15. What should the facility do to prepare for a funding source audit by DVR?

16. List the most frequently cited audit findings relative to internal control practices and comment on methods for correcting them.

Answers to Exercises

1. — An annual or more frequent inventory of all supplies, raw materials, and assets to include building, land, equipment, tools, machinery, and vehicles.

   — Serially number checks for all checking accounts.

   — Reconciliation of all checking accounts by someone other than the person who issues the checks.

   — Separate record of marketable securities.

   — Three step system for verifying the work performed by employees in the financial area.

   — Security investigation procedure required for all asset losses.

(See pages 26-29)

2. a. List of approved vendors: purchases are made only to those firms found suitable. Comptroller and CEO review the list periodically,

   b. Purchase requisition: prepared to establish a justifiable need and approved by a person in authority; to verify need and assure compliance with the budget,

   c. Purchase order: the only legal authorization which obligates the facility to pay for the desired good or service. It is serially numbered, kept secure, and limited as to whom can prepare,

   d. Receiving report: assures that the item was received in the quantity and quality desired, and triggers the payment cycle,

   e. Voucher: not prepared without complete supporting evidence and provides the authorization for payment; prepared by one person but approved by another,

   f. Voucher register: provides a clear audit trail for expenditures,

g. Unpaid voucher file: unpaid vouchers are checked periodically to assure timely payment,

h. Check and check register: CEO signature required for all checks under $500—two signatures, for example, board finance chairperson or another board member, and CEO, are required for those above that amount.

i. Paid voucher file: provides another source for audit trail in order to provide for historical accuracy review.

(See pages 27-29)

3. a. Two people always open mail,

b. Each check endorsed "for deposit only-NOVA,"

c. Prenumbered carbonset receipts used,

d. Letter of acknowledgement used,

e. Cash receipts register used,

f. Comptroller cross-checks transactions,

g. Receipt books are kept in safe overnight, and

h. One staff person is responsible for mail receipts.

(See pages 33-34)

4. a. Serially numbered checks used,

b. Requires the completion and approval of a voucher and supportive documentation,

c. Signed by authorized personnel only, and

d. Accounts reconciled monthly by someone other than the person who issues the check. CEO should receive and review the actual bank statement and the signature of the endorsers.

(See page 26)

5. a. Maintained in an appropriate container (safe deposit box), and

b. Separate record maintained (by insurance agent and in safe at facility).

(See pages 27, 31, 34-35)

6. Vested interest could result in an "uncontrollectable" being written off too fast, thus freeing the other party of a just debt. An uncollectable could be drawn out due to friendship or sympathy. In either case the result is cash flow problems and unfair business practices.

(See pages 29, 31)

7. a. Accurate listing and valuation,

b. Physical security,

c. Restricted access,

d. Outside guards or monitoring,

e. Periodic physical count by persons other than those who keep the listing, and

f. Risk protection package.

(See pages 27, 31)

8. a. Responsibility assigned to a responsible employee, for example, comptroller,

b. The entire risk protection package reviewed annually by the board,

c. Review of carrier annually for actual performance on claims, prevention program, and cost,

d. Current replacement costs of all assets determined annually, and

e. Be sure to include officer's errors and omissions, product/service liability, and other special need insurance.

(See pages 27, 33)

9. a. Prompt and accurate recording of all receipts,

b. Subject to daily review by second person,

c. Serially numbered carbonset receipts,

d. Written procedures and policies for revenue receipt recording and deposit, and

e. Deposit intact daily—not used for petty cash or change fund.

(See pages 27, 33-34)

10. a. Time record used to document time worked,

b. Rate of compensation indicated (in persons payroll file),

c. Clearly established terms for payment—written policies and procedures,

d. Triple check system to verify work performed,

e. All payments by check—cash payroll requires vouchers, witnesses and protection against theft,

f. Maintain a separate payroll register,

g. Establish a separate payroll checking account,

h. Separate pay file for each employee, and

i. Use of approved payroll list.

(See page 35)

11. Bonding for protection against fraud provides protection for employees involved in financial management as well as the organization. Bonding, as part of the risk protection package, assures a certain level of the assets of the organization against misuse. Bonds may vary in amount according to the sensitivity of the position and the potential for abuse. Bonding requires full disclosure of the person's history and background.

(See page 29)

12. The board of directors is ultimately responsible for the fiscal management of the organization. They must assist in the development of, and the approval of all policies and procedures in relation to fiscal controls. The board assigns the levels of authority and spheres of responsibility for fiscal management. It should, by whatever means possible (internal control committee or outside consultant), review all internal controls at least annually. Further, the board must stand behind its policies and procedures.

(See pages 32, 36)

13. External audits are designed to verify the facility's accounting system and effects of internal controls. Usually conducted by a CPA who is certified by the state of residence. The board of directors usually requests such an audit. The CPA prepares a report which includes several different types of statements and attachments. The report or audit results also provide an independent assessment of the facility's actual financial condition, and its financial practices.

(See page 30)

14. Internal audits are performed by authorized persons within the organization to determine compliance with facility fiscal policy and adequacy of financial reports coming from inside the organization. They are usually performed more often than external audits and, therefore, provide management with current information and data for corrective action.

(See page 30)

15. a. Be aware of and in compliance with DVR's policies and procedures regarding the financial aspects of grants and funds paid in fees,

    b. Provide clear audit trails for revenue received from and expenses related to DVR program,

    c. Clearly document responsibility, and

    d. Assemble the materials requested for the DVR site visit.

(See page 30)

16. a. Failure to use prenumbered receipts: purchase preprinted, self-carbon receipt books. Set policies and procedures for cash/check receipts,

    b. Failure to have at least two persons opening mail and handling cash collections: specifically assign two responsible staff to open mail and handle the cash/checks. Set clear written policies,

    c. Receipts not deposited on a timely basis: this increases the physical security problem and also loses interest potential from loan sources. Facility should deposit at least daily and assign specific responsibilities for this function,

    d. Failure to make all disbursements by check: set up a voucher system,

    e. Checks do not require two signatures and have not been countersigned: only checks over an amount set by the board need to be countersigned. CEO has sole authority to sign checks under that amount. In case of the CEO's extended absence, an alternate should be designated,

    f. Bank statement reconciliations are handled by same person who handled disbursements: the comptroller could more appropriately reconcile the account while the disbursement's clerk handles the unpaid voucher file, checks, and check register. Periodically, on an unannounced basis, the CEO should reconcile the bank accounts.

    g. The write-off receivables is performed by a person with responsibility for the records of vendors and accounts receivable as uncollectable: these functions should be kept separate, and at the higher personnel level, involving more than one person,

    h. Marketable securities kept in a file cabinet: keep them in a safe deposit box with two sets of records somewhere else,

    i. Inventory not checked physically on a regular basis: board policy should require CEO to see that annual physical count inventory is performed,

    j. Excess cash in restricted funds are not subject to adequate controls and thus become targets for abuse: the voucher system and approval systems should be used to protect against this, and

k. Employees in the accounting department work excessive overtime, requiring them to be alone in the department or to take records home, or employees with significant financial record keeping or management responsibilities do not take extended vacations which would require another employee to do their job: such practices increase the potential for altering records and reduce the likelihood of such practices being identified by another employee. Overtime in accounting should be strictly controlled. Two persons should be present at all times. Accounting records should not be taken home by employees, and accounting staff and other personnel with significant financial responsibility should be required to take periodic vacations so that another employee must do their job.

(See pages 30-31)

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BUDGETING

While budgeting for not-for-profit rehabilitation agencies is the major focus of this chapter, a parallel and equally important concept is program planning. Planning, as defined by Moore (1970), is the "thoughtful, rational consideration of objectives and alternative means to achieve those objectives" (p. 39), whereas "budgeting is the translation into financial terms of the plan for allocating resources; it is the controlling vehicle against which actual performance is measured" (p. 39). Expressed another way, a budget is a predetermined statement of management policy during a given period which provides a standard for comparison with the results actually achieved (Brown & Howard, 1975). Horngren (1972) indicates a budget is "a quantitative expression of a plan of action that summarizes the objectives of all sub-units of an organization" (p. 121).

The information in this chapter presupposes, then, a commitment to a close integration of programming, resource allocation and control of expenditures to achieve agency objectives. The facility director who makes program and budgeting decisions on the basis that "God will provide the money from somewhere" if funds run out, is dealing with a concept of planning and budgeting that is far beyond the scope and expertise of this writer.

Purpose of Budgeting

As Horngren (1972) indicates, budgets can be used in a variety of ways, including planning, measuring performance, evaluating performance, setting goals, communicating, motivating, controlling expenditures, and authorizing actions. Basically, however, all budgeting processes relate primarily to planning, coordination, and control (Gressman, 1968). Agency administrators must try to anticipate, as accurately as possible, present and future revenue sources and the costs of producing that revenue in terms of money, time, personnel, programs, space, public opinion, and so forth. Decisions to expand, cut back on, or take on new programs must be looked at in relation to the interactive effects involved and not as discrete decisions. Administrators must also have some way to monitor the effects of their decisions to assure that expenditures are proceeding as planned. If not, the administrator must identify problem areas before they get out of hand and threaten the ability of the agency to meet its financial or program commitments. The proper preparation and utilization of an agency budget can do much to assist agency management in carrying out these most important management functions.

Budgeting as a Function of Planning

As indicated previously, the budgeting process is not synonymous with program planning. Rather, budgeting is part of program planning to the extent that it provides estimates of costs and incomes related to various program objectives. It is quite possible, of course, that during the course of the budgeting, circumstances may require revision of some previous program decisions.

The formalizing of a budget forces the administration to begin forecasting for revenue producing activities such as contract income, fees for service, grant income, donations, endowments, and income from a variety of other sources. At the same time, the costs of realizing income from these various revenue sources must also be considered. The budget plan will consist of a proposed income statement and a proposed expense statement which reflect the results of both the revenue forecast and related program plan. This "master budget" is the additive result of specific budgets prepared for each program or function within the facility. Such a master budget should help management plan for future cost flow (e.g., the feasibility of adding new staff, program expansion, addition of new programs, benefits of acquiring additional space, continuing present industrial contracts or taking on new contract obligations, seeking grant support for various activities, purchase of equipment, implementing prime manufacturing, and a variety of other equally important management decisions).

Of course, one of the major components of programming is how one decides which staff addition, program expansion, equipment purchase, and so on, is most feasible given overall program needs and available or projected revenue. One rather innovative use of budgeting in the planning process has been the advent of zero based budgeting (ZBB)[1] first introduced by Peter Pyhrr in 1970. ZBB assumes that all programs or functions of an organization compete against one another for available resources and that each year, each program should rejustify its existence without consideration of past resource allocations. This is quite a different approach than the incremental budgeting process practiced by many agency administrators. Incremental budgeting is essentially taking last year's budget, adding some predetermined percent (for example 5% or 10%) to various line items to allow for inflation or whatever, adding up the total, and labeling the result as "next year's budget." As Herzlinger (1979) indicates, this method of budgeting is viewed with disdain by professional budgeteers as it merely continues past activities and in doing so, may perpetuate past mistakes or mediocre performances.

A review of selected literature (Watkins, 1978; McCandless, 1978; Neuman, Suver, & Brown, 1978; Reckers & Stagliano, 1977; Suver & Brown, 1977;) indicates that the implementation of ZBB has its merits and its problems. However, some of the principles of ZBB seem to have relevance for rehabilitation facility administrators. Pyhrr (1970) defines ZBB as:

> an operating planning and budgeting process which requires each manager to justify his entire budget request in detail from scratch (hence Zero-Base) and shifts the burden of proof to each manager to justify why he should spend any money at all. This approach requests that all activities be identified in "decision packages" which could be evaluated by systematic analysis and ranked in order of importance. (p. 12)

McCandless (1978) indicates that a decision package should include:

> What the program or activity is to achieve and how.
>
> Costs and benefits for the short and longer term, quantified if possible, and other criteria for ranking the professional against others.
>
> Alternative plausible means of achieving the stated objectives and the reasons why they were rejected.
>
> Consequences for not doing the activity.
>
> Information for different levels of effort or funding. (p. 45)

Each decision package should also include ways in which the effectiveness and efficiency of the proposal could be evaluated. Such a system would be helpful in making decisions regarding issues such as:

> given X amount of revenue, should the agency add an evaluator, contract procurement specialist, placement specialist, or other position?
>
> given X amount of reduced revenue, should the agency maintain the wood refinishing program, the small appliance repair program, or other program?
>
> given a desire for program expansion, what direction is most feasible?
>
> given a variety of revenue producing activities, which are most feasible in terms of short and long term cost commitments?

In other words, even though not-for-profit rehabilitation agencies do not normally consider the programs competing against one another for available resources (especially those resources which have their uses restricted by a funding or third party agency), there are still many program decisions involving competition for available resources, even though they may not initially be perceived that way.

Too often the not-for-profit administrator sees the agency operating on fixed incomes from a variety of sources over which there is little input or control. In reality, many planning and budgeting options are available. As Herzlinger (1979) so aptly points out:

> catagorical funding leads to serious suboptimization. Managers don't ask, "What is the best thing to do?" Instead they ask, "What is the money available for?" and the activities for which funds are available are not necessarily those that ought to be carried out. (p. 65)

As a result, administrators 1) get caught up in trying to justify the status quo rather than devise more viable alternatives or, 2) funds are secured to finance programs considered important to the funding source rather than the agency. Consistency with the objectives of the agency, or at times even the expertise of the agency staff, are frequently overlooked in the push to obtain funds.

When an agency gets "locked in" to a revenue source with whom there is little input or control, prior planning can become faulty. This is not to say that facility administrators should not seek monies that come available for new or innovative programming, but that the facility's program resources must sufficiently meet the obvious and not so obvious demands of new programming. For example, are there increased clerical or record keeping costs related to showing accountability for the funds received? How much, if any, additional work load will be added to staff not directly related to new programming? Could the program be maintained if funding were cut or stopped altogether? If not, what effect will cancelling the program have on staff, clients, community relations, and others? How much input or control might the funding source want to have regarding the direction of future planning and programming? Often the more money a funding source provides, the more control that source has, or may want to have, over facility management.

Budgeting as a Function of Coordination

If the budget is prepared by facility administrative personnel with little or no input from other staff, it is unlikely that the process will lend much to the overall coordination of agency objectives. The administrator must remember that often budgeting involves concessions and limitations of program/staff activities. Strong leadership will be necessary if staff participation is to be constructive. It is this participation that maximizes the potential for coordinating program planning with the budgeting process. Most agencies are made up of a variety of programs or functions that use agency resources. Changes in the resource allocation for one program or function are quite likely to have an effect on one or more of the other programs or functions.

Availability of funds is generally the most important determinant of program expense. Therefore, it is most prudent to estimate levels of revenue and match projected expenses to projected revenues. Some programs will generate more revenue than expenses while others will not generate enough to cover expenses. Some programs, such as placement or remedial education, may not generate any revenue at all. The bottom line is that a facility should develop a budget that projects overall revenue to at least equal overall expenses, even though some individual program budgets may project an operating loss. It may be necessary to use the excess revenue generated by some aspects of the facility operation to offset the losses of another. Only careful analysis and coordination of the facility's resources will make it possible to develop a balanced budget. Decisions have to be made regarding the distribution of indirect costs and the control of direct costs. Therefore, it is important that key staff understand and have input into these decisions. Involvement in program activity budget preparation and understanding how each sub-budget fits into the total agency budget should 1) help in the coordination of total agency resources, and 2) help staff understand and support cost control measures that may be necessary to achieve a balanced budget.

Budgeting as a Function of Control

Perhaps the most important use of the organizational budget is for cost control and measuring the overall fiscal performance of the agency. In this regard, analysis of actual verses budgeted revenue and expenses is the only way to measure whether financial plans are being carried out and if staff at various levels of fiscal control are adhering to budget expectations. To carry out such an analysis, the chart of accounts utilized in the accounting system must be set up to reflect the revenue and expenses allocated to each department, program or function in the agency. (See Chapter 5 for a detailed discussion of the chart of accounts). The organization of revenue and expenses basically reflects the cost accounting system. As Herzlinger (1979) indicates, many organizations find this to be a very costly and time consuming process, complicated by the fact that a separate system for reimbursement may be needed. However, inasmuch as the Commission on Accreditation of Rehabilitation Facilities (CARF, 1980) requires many service and production costs to be separated from general costs, and many state funding agencies are beginning to base service fees on actual agency program costs, revamping the accounting system for internal managerial purposes should be well worth the effort.

Cost accounting is not budgeting however. As Moore (1970) indicates:

> a basic difference between budgeting and cost accounting is that budgeting is the coordination of plans for action, whereas cost accounting is measuring the cost incurred resulting from action taken . . . thus budgeting is not to be conceived as another function of the accounting discipline with its attendent emphasis on valuation of assets and results from operations but rather as a technique to allocate resources and coordinate management ambitions to achieve the best overall results from the activities budgeted. (pp. 4-39)

Responsibility Budgeting

McConkey and Weele (1976) indicate that in the profit sector the "primary thrust of budgeting must be to motivate managers to optimize their results" (p. 81). A "given" in this statement is that key staff have some control and responsibility for some of the company resources. In a rehabilitation facility, the decision to move toward such a model would be greatly influenced by the degree to which revenue and costs related to departments, programs, or functions are discretionary. Costs are defined as any sacrifice of resources (space, staff, revenue, etc.) necessary to support an activity, for example, "the cost of manufacturing an article, rendering a service or perform-

ing a function" (Staubus, 1971, p. 1). Assuming that sufficient programming costs are discretionary rather than fixed, then responsibility budgeting requires the recognition of decision centers throughout the agency and the ability to trace costs, revenues (and assets and liabilities where relevant) to managers, coordinators, supervisors, and others who are primarily responsible for making decisions about the costs or revenues in question.

Assume for sake of example the simplified organizational chart illustrated by Exhibit 4-1. In the responsibility budgeting model, the supervisor of vocational evaluation would be responsible for recommending and monitoring the vocational evaluation budget. The director of vocational services would be responsible for reconciling and monitoring the budgets from vocational evaluation, placement and adjustment services. The director of rehabilitation services would be responsible for reconciling and monitoring the budgets from vocational and medical services. The facility administrator would be responsible for monitoring the total facility budget. Exhibit 4-2 shows the lines of responsibility at each management level.

Thus, the supervisor of vocational services receives the monthly responsibility performance report from the coordinator of vocational evaluation with an explanation of any favorable or unfavorable variances from the amount budgeted for each category. The supervisor of vocational services makes a similar report to the director of rehabilitation services, and so on. Exhibit 4-3 is an example of such a performance report. While Exhibit 4-3 depicts an agency with four levels of budget responsibility and a rather large budget, the example is relevant for as many or as few budget responsibility levels needed or desired by an organization.

EXHIBIT 4-1
Rehabilitation Agency Simplified Organizational Chart

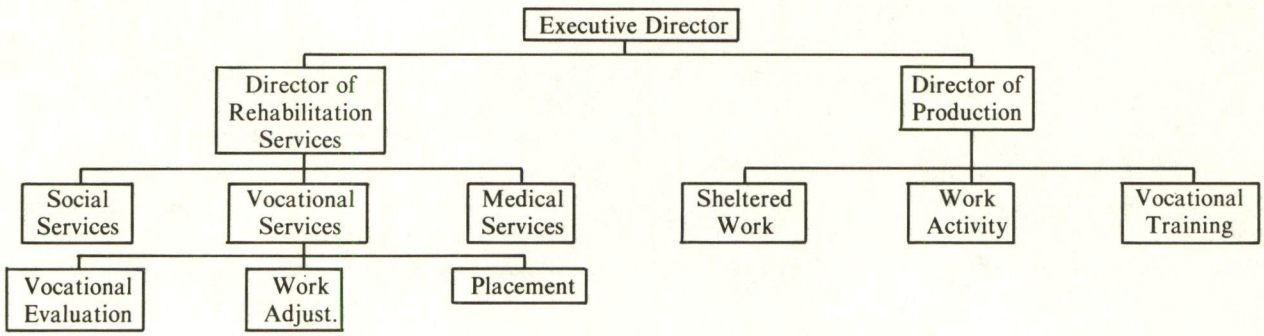


EXHIBIT 4-2
Responsibility Reporting at Different Management Levels

Executive Director	Rehab. Services	$297,000
	Production	325,000
	Total	$622,000
Director Rehabilitation	Voc. Services	$102,000
	Soc. Services	75,000
	Med. Services	120,000
	Subtotal	$297,000
Supervisor Vocational Services	Voc. Eval.	$ 40,000
	Work Adj.	37,000
	Placement	25,000
	Subtotal	$102,000
Coordinator Vocational Evaluation	Voc. Eval.	$ 40,000

The most important features of responsibility budgeting and control are 1) the involvement of key staff at each level of responsibility for preparation of each sub-budget and, 2) the clear description of which costs or revenues staff will be held accountable for (i.e., controllable costs or revenues). Controllable costs can be defined as those costs directly regulated at a specific level of management authority within a given period of time (Horngren, 1972). For the previous example to be valid, we must assume that vocational evaluation revenues (fees for services) can be influenced by the actions of the coordinator of vocational evaluation. The same assumption must hold true for evaluation supplies, travel, clerical charges (if a pool is used), equipment purchase, and phone expenses (long distance charges). A third and equally important aspect of responsibility budgeting is that staff, given the responsibility to control certain costs, also be given the authority to influence decisions which effect those revenues and expenses. Being held responsible for revenues or expenses can cause serious motivational and performance problems among key staff if one does not have authority to at least influence related decisions.

While responsibility budgeting and budget control seems straight forward and simplistic (although sometimes time consuming), decisions as to which costs are controllable, by whom, and within available time frames are often difficult to resolve. Fixing the focus of control responsibility can often be a problem. For example, if clients' participation in vocational evaluation is influenced by the skill of the intake worker, but the charge to maintain a certain level of client attendance (and revenue) is relegated to the evaluator, how is the issue to be resolved?

The decision to undertake a responsibility based budgeting system must be weighted carefully and, if done, carried out with a spirit of trust and mutual cooperation. If the system is well devised, it should help motivate staff behaviors that are directed toward meeting the agency's programmatic and fiscal goals in an efficient and effective manner. If implemented for punitive reasons—"to lay the blame where it belongs,"—then it will most likely do more harm than good.

EXHIBIT 4-3
Rehabilitation Facility Director's Performance Report

	ACTUAL EXPENDED This Month	ACTUAL EXPENDED Yr. to Date	VARIANCE* WITH BUDGET This Month	VARIANCE* WITH BUDGET Yr. to Date
Exec. Director				
Rehab. Serv.	$22,700	$ 77,280	$(5,325)	$(12,410)
Prod. Serv.	35,000	70,000	500	(10,000)
Total Cont. Costs	$57,700	$147,280	$(4,825)	$(22,410)
Rehab. Services				
Voc. Serv.	$ 6,500	$ 20,280	$(1,525)	$(3,310)
Soc. Serv.	5,200	17,000	(800)	(2,100)
Med. Serv.	11,000	40,000	(3,000)	(7,000)
Total Cont. Costs	$22,700	$ 77,280	$(5,325)	$(12,410)
Voc. Services				
Voc. Eval.	$ 2,550	$ 8,625	$(675)	$(1,510)
Placement	1,850	5,255	(350)	(700)
Work Adj.	2,100	6,400	(500)	(1,100)
Total Cont. Costs	$ 6,500	$ 20,280	$(1,525)	$(3,310)
Voc. Eval.				
Eval Fees	$ 1,600	$ 5,300	$(500)	$(1,000)
Supplies	50	175	25	15
Travel	250	275	(100)	(100)
Clerical	450	2,500	(50)	(350)
Equipment	75	75	-0-	-0-
Phone	125	300	(50)	(75)
Total Cont. Costs	$ 2,550	$ 8,625	$(675)	$(1,510)

*Amounts shown in parenthese are unfavorable or deficit spending

NOTE: The amounts shown under the Actual Expended column are the actual expenditures for the month in question. The variance shows the difference between the expended amount and the amount budgeted for the month (not shown). Thus, the amount budgeted for vocational evaluation was actually $2,550 less $675, or $1875. This figure would be shown in the working budget for vocational evaluation under a column entitled *Amount Budgeted*. To simplify this exhibit, the amounts have been deleted to focus attention on the variances.

Projecting Service and Contract Capacity/Revenue

A major aspect of responsibility budgeting is the involvement of appropriate staff in the projection of income from various sources.Even in cases where rehabilitation facilities receive a somewhat fixed income from certain funding sources, questions raised at the beginning of each annual budget period as to whether a funding increase may be expected or negotiated, depend to some extent on a projection of how much service can be delivered. Thus, many of the issues related to maintaining or increasing funding are related to whether a facility can maintain or increase its present level of service with existing staff and other resources. In the area of industrial contracts, for example, income is related to the ability of the facility to maximize the utilization of space, manpower and other resources.

Estimating Service Capacity/Income

The estimation of service capacity depends first on the administration's commitment to a service area in terms of staff and facility. The number of clients served in any given area depends to a great extent on the number of staff and the amount of space allocated to that area. It is important that the service staff be involved in decisions of appropriate client/staff ratios and space allocations necessary to carry out the service function.

Assuming that the above questions have been agreed upon, the service function can be defined in terms of some unit of service for which a cost-per-unit can be computed. This unit measure of output can also be used to estimate the potential income from that service program. Assume, for sake of example, the following information related to a facility's evaluation program.

Service example.

Problem: What is the projected income from vocational evaluation at 100 percent capacity; and at 80 percent capacity?

Assumptions:

* One vocational evaluator capable of working with five clients at any given time.
* The average length of time for an evaluation is four weeks.
* The funding agency negotiated a contract specifying payment of $100/week for evaluation services (hence a unit of evaluation is one week.)
* Agency policy allows three weeks vacation per year, eight paid holidays, ten sick days, and two personal days per year for professional staff (7 weeks for which the evaluator may not be available to provide services).

Computation: 1 evaluator × 5 clients × 45 weeks × $100 = $22,500 @ 100 percent; and $18,000 at 80 percent.

The computation for income at 100 percent capacity assumes the evaluator will take vacation time, sick and personal days, and that all clients will attend, on the average, four weeks for evaluation. If we now assume one of the five projected clients will be absent during any given week, then the projected income for that period will drop by 20 percent. Other variables that might have a negative effect on the service revenue would be a reduction in available fees, client attrition, loss of staff, and so on.

While this is a rather simple and straightforward projection of service delivery from fees, the job becomes more complex when working with services where computation of a net cost of output is not so clear cut. In placement, for example, the time and effort to place one client may be quantitatively more than the time for another. In this case, it is not uncommon to try to recover the overall costs of placement and negotiate the minimum number of placements expected, taking into account referrals, case load composition, the employment market, and other factors. In any event, when projecting income from service programs, one must take care not to make unrealistic assumptions about the number of units that can be produced. For example, if staff member output is measured in hour or half hour blocks of time, as in the case of counselors or occupational therapists, they cannot be expected to deliver services all available hours of each working day. Time must be a allocated for preparation, report writing, public relations, staff development, and so on, in addition to sick time, vacation time and personal time, if a realistic performance standard and cost per unit of service is to be reached.

Projecting Income From Contracts

Contract income depends primarily on the number of man and machine hours available for work, the percentage of time utilized, and the charge for the contract work itself. Man/machine production is basically projected as the number of hours the machine can be expected to function (taking into account time for repair, maintenance,

etc.), multiplied by the average expected productivity (where an operator is involved) during that time, multiplied by the projected usage of the machine.

Man/Machine production = Y × P × U
where Y = number of machine hours expected,
P = productivity expected during those hours, and
U = hours machine used

Therefore, if we wanted to project the number of units that might be produced on a heat sealer for a given week, we might proceed as in the example below.

Production Example.

Problems:

1. With the designated operator, how many units can be produced each week on the heat sealer?
2. How much revenue will the machine generate under the given assumptions?

Assumptions:

* 1 heat sealer available 38 hours/week (2 hours required for maintenance)
* at 100 percent operation, the machine can produce 50 units/hour
* the productivity of the available operator is 80 percent of standard
* the operator is available only 75 percent of each day
* commensurate wage for an operator is $4.00/hour for 50 units @ $.08/piece.
* the contract was bid at cost of wages + 100 percent for overhead

Computation:

1. 1 heat sealer × 38 hrs × 50 units/hr × 80 percent productive operator × 75 percent utilization = 38 × 50 × .80 × .75 = 1140 units.
2. Given 50 units/hr at $4.00/hr wage cost, wage cost/unit = $.08. Therefore, wages for 1140 units = $91.20: At 100 percent wages, overhead = $91.20, and total revenue/machine = $182.40/week. (Contract bid price = $.16/unit.)

This example is particularly relevant when operators are clients who cannot work at 100 percent of standard, where only some workers can operate certain machines, and where these workers are involved in non-work (service) activities during each day.

Man Production Hours and Income

In a workshop where machines are not utilized to a great extent for contract work, the major revenue producing asset is the number of full time, man hours available for production activity. Since many people working in sheltered workshop settings are not capable of working at 100 percent of a given work standard, and as contracts are required by the Department of Labor to be bid on the basis of normal, non-handicapped work performance, it is essential that a workshop manager know how many standard man hours are available for use. This will not only aid in the prediction of contract revenue, but also allow for efficient and effective production scheduling.

Man hours/production revenue example.

Problems:

1. Compute the number of standard industrial man hours available for work per year at 100 percent utilization.
2. Estimate wage cost for these hours at minimum wage.
3. Estimate revenue needed to cover overhead costs.

Assumptions:

* workshop average daily attendance = 60 persons
* average worker productivity = 75 percent of industrial standard
* workshop open 5 days/week; 5 hours/day; 50 weeks/year
* estimated overhead cost = 80 percent of wage costs

Computation:

1. 60 persons × 50 weeks of operation × 25 hours/week × 75 percent average worker productivity = 60 × 50 × 25 × .75 = 56,250 available standard man hours.
2. 56,250 hours at $3.25 = yearly wage cost of $182,812.50
3. Revenue needed to cover overhead costs = $182,812.50 × .80 = $146,250.00

Note: a yearly contract revenue of $329,062.50 would be needed to cover the cost of contract operations and wages at 100 percent utilization.

It is unlikely that a workshop will be able to operate at 100 percent utilization. Therefore, the potential revenue figure should be adjusted downward to reflect a more realistic goal. Major factors effecting utilization are client absenteeism, client participation in non-work activity, client down time, amount of contract work available for processing, the number of days/weeks the workshop is open for work, and accuracy in determining production standards. Other factors related to actual income received include: spoilage and rework, accuracy in determining all direct and indirect overhead charges and recovering these costs as part of the contract bid, and effective control of bad debts, and late payments.

Cost, Costing, and Cost Allocation

Determination of Cost and Revenue Centers

While it is important to accurately project potential revenue from a variety of sources, it is no less important to budget the overall costs of operations and determine how costs relate to the various programs and functions involved. Perhaps one of the first items of business when building a functional budgeting system is to define the income and cost centers within the organization and make a decision on what costs will be allocated to, or be absorbed by, each of these centers.

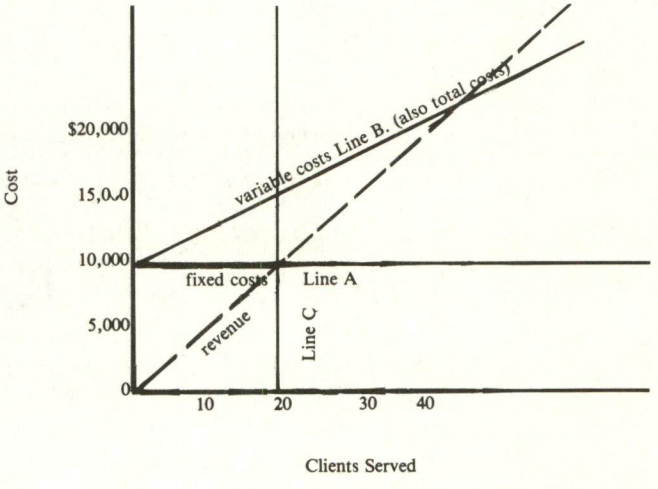
According to Staubus (1971) a cost is a sacrifice; a measurable "cost is the relinquishment of a measurable asset or the creation of a measurable liability" (p. 1). He goes on to point out that "costs do not exist, they happen" (p. 2). Essentially, costs in a rehabilitation facility may be related to the space used to carry out a program, staff time, building maintenance, or cash outlay for supplies, materials, utilities, and so on. Costing, on the other hand, "is the process of determining the expense of doing something, for example, the cost of manufacturing an article, rendering a service, or performing a function" (p. 1). To do this, a decision must be made as to how the agency will identify, measure and accumulate the cost of any activity or function. This information may then be used to determine the feasibility of continuing a given function, to set fees for service, or to determine if a particular activity is being carried out efficiently and effectively. A cost center is any function or program for which costs are identified, measured and accumulated. In most rehabilitation facilities, cost centers are departments or programs, although there may be more than one cost center in a department. For example, a vocational service department may have vocational evaluation, work adjustment, and placement as separate cost centers within the department. In a production setting, individual contracts or prime manufacturing operations may be considered cost centers in and of themselves, particularly when they take up a major portion of the workshop's available resources (space, supervision, overhead, etc.)

A revenue center, separate from a cost center, is a department or a program responsible for both revenue and expense (Horngren, 1972). Examples would be programs where fees are collected for services, the contract workshop, or the fund raising department.

Fixed and Variable Costs

According to Horngren (1972) variable costs are those that vary with the different levels of activity related to a cost activity (e.g., the number of working hours it takes to complete a contract varies with the quantity of work to be done, long distance phone charges vary with the number and length of long distance calls). Fixed costs, on the other hand, are those that are necessary to maintain a cost activity regardless of activity level. Fixed costs are, however, only fixed in relation to a given period of time. Most costs, given enough time, will change for one reason or another. The total cost of an activity, or of a facility for that matter, equals the total of related fixed and variable costs. It is helpful to understand these concepts in order to compute the revenue necessary to "open the doors", so to speak, as well as determine the relationship between costs and the various facility activities or programs. In Exhibit 4-4 we can see it will take a revenue of $10,000 to support the fixed cost related to activity (line A). Line A indicates the fixed cost of operating

EXHIBIT 4-4
Break Even Cost Analysis



program X is $10,000, that is, the program costs $10,000 before it serves any clients. Line B shows the variable costs involved in serving X number of clients. If 20 clients are served (line C), $5,000 will be spent in variable costs. When added to the fixed cost figure, the total cost of operating program X is $15,000. If the dotted line represents revenue, then program X will have to serve 40 clients to "break even." Examples of fixed costs would be personnel salaries, rent, insurance, interest, and depreciation. Examples of variable costs would be commodities, travel, utilities, postage, consultants, and client payroll.

Direct and Indirect Costs

Another important aspect of functional budgeting and cost accounting is the identification of direct and indirect costs related to various activities. Direct costs (such as direct wages for labor, direct materials and direct overhead) are those costs directly related to and thus assigned

to a product, contract operation, service program or department. Generally, these costs can be determined exactly and without special allocation; indirect costs (such as indirect labor and indirect overhead) cannot easily be traced to a given activity and must be distributed to product, activities, or departments on some equitable allocation base (Gressman, 1968). Examples of indirect costs would be administrative salaries, accounting costs, utilities, building insurance, accreditation fees, and so on. One could also look at direct costs as being more or less controllable whereas indirect costs may continue to exist even if various programs or activities are eliminated.

Production overhead. Essentially all production costs, other than direct materials and direct labor, make up production or manufacturing overhead. It should be remembered, however, that when the labor of supervisors, maintenance staff, material handlers, and so on, can be directly related to a contract or department, their wages would be considered as direct costs rather than a part of indirect overhead.

Profit and Loss

In many not-for-profit agencies, the terms "profit" and "loss" refer respectively to an excess of revenue over expenses, and expenses in excess of revenue. While the stated objective of most not-for-profit agencies is to operate on a break even basis, an efficiently and effectively run facility may/should be able to generate an excess of revenue over expenses for the overall operation.

Types of Budgets*

The major budget formulated by an organization is the master budget or management budget which summarizes the projected revenues and expenses related to operation of the total organization. The master budget has two basic components, the operational budget and the financial budget. This budget, and the sub-unit budgets which make it up, may be done in as much detail as is necessary for efficient and effective facility management. The choice of budget structures and budget periods largely depends on the structure of the facility and the uses of the budget information. Generally, the annual budget is broken down by quarter, month, or both for control purposes. Annual budgets can also be developed on a continuous basis; as each month or quarter elapses, the budget for an additional month or quarter is added to the existing annual budget. The advantage to continuous budgeting is that facility management is regularly directing its thoughts to the coming budget year. It is not uncommon with this method for facilities to develop budgets for two or three years in advance of any given operational year.

The primary budgeting system found in many rehabilitation facilities, particularly those with small programs and revenues, is line-item incremental budgeting. This type of budgeting is tied closely to line-item or object accounting. It essentially lists the various line-item revenues and expenses, and the amount of money allocated for each. Such a budget might be divided into costs related to salaries, commodities, travel, contractual, capital, revenue, and so on, with little attention given to how budgeted amounts are related to the various programs or functions. The budget for the coming year is generally derived by adding additional amounts to various line-items based upon some factor for inflation and other expected cost increases. This process is not recommended for reasons stated earlier in this chapter.

A modified form of incremental budgeting involves the assignment of cost and project income over the various programs of the agency without breaking out the direct costs from indirect costs (see Exhibit 4-5). The problem with this type of budget is that again, it treats all costs as direct and uses an "add on" cost basis to compute the estimation of the following year's budget. Although indirect costs are obviously distributed across the programs, it is not clear which of these costs are direct costs and therefore subject to control at the responsibility center level. On the other hand, for a small agency with only a few programmed components, the cost of being more specific as to the nature of direct and indirect cost and their actual program allocation might not only be prohibitive, but have little managerial value as well.

*The terms defined in this section will be used throughout the discussion of developing and utilizing various types of budgets and are key to understanding the development of a functional budgeting system.

EXHIBIT 4-5
Agency Budget with Programmatic Cost Assignment*

	Eval. & Adj.	Residence	Wkshp.	Total FY	**Est. FY
Personnel					
Salaries	$ 45,000	$ 18,000	$ 44,000	$ 107,000	
Fringe	4,500	1,800	4,400	10,700	
Total	$ 49,500	$ 19,800	$ 48,400	$ 117,700	$ 128,290
Supplies					
Postage	$ 150	$ 150	$ 150	$ 450	
Office	800	800	800	2,400	
Maintain.	100	100	300	500	
Program	400	200	500	1,100	
Total	$ 1,450	$ 1,250	$ 1,750	$ 4,450	$ 4,850
Contractual					
Conslt. Psy.	$ 2,000	$	$	$ 2,000	
Rent	800	400	1,800	3,000	
Audit	1,000	1,000	1,000	3,000	
Telephone	1,000	1,000	1,000	3,000	
Accred.	400	400	800	1,600	
Bldg. Ins.	500	500	1,500	2,500	
Utilities	400	400	2,000	2,800	
Gen. Liab.	300	300	300	900	
Total	$ 6,400	$ 4,000	$ 8,400	$ 18,800	$ 20,490
Depreciation					
Bldg.	$ 200	$ 700	$ 1,500	$ 2,400	
Equipment	3,000	1,000	8,000	12,000	
Total	$ 3,200	$ 1,700	$ 9,500	$ 14,400	$ 16,000
TOTAL	$ 60,550	$ 26,750	$ 68,050	$ 155,350	$ 169,630

*Budget line items were not meant to be all inclusive.

**Estimated increases are approximately 9% of previous year.

When budgeting is used for planning purposes and to determine as efficiently as possible the cost of its various operations, the concepts of functional budgeting and accounting are useful. Functional budgeting is the distribution of revenues and expenses to management and general functions, and to the various programs or other operation carried out by the agency. Functional budgeting also calls for 1) the distribution of the facility's overhead costs across its programs to determine the total cost of each program or operation; and, 2) program planning budgeting which relates budget operations to the goals of the organization and the effectiveness of its programs. Budget analysis includes the development of cost effectiveness and cost benefit measures. Budget allocations are generally based upon the results of these analyses against stated goals and objectives. The various sub-budgets generally show the actual distribution of costs as determined by management planning, and are used for evaluating the fiscal performance of the related programs or functions.

In Exhibits 4-6 to 4-23, Facility X has a service component made up of vocational evaluation, adjustment services, and a residential unit; and a workshop operation where contracts x, y and z make up the primary sources of revenue. For the sake of brevity and example, the sub-budgets related to the service programs were combined. In actual practice, they would be handled as separate programs. Also, while the various sub-budgets show allocations of costs for various items such as utilities, administration, insurance, and maintenance, the basis on which these allocations might have been made was not dealt with here. An indepth treatment of cost allocation is found in Chapter 5.

In a functional budgeting system, the overall budget or master budget generally consists of an operating budget and its sub-budgets, and a financial budget and its sub-budgets. The following format for sub-classification of the master budget and the sub-budget formats were taken, for the most part, from Horngren (1972) unless indicated otherwise.

EXHIBIT 4-6

Master Budget

FACILITY X

Operating Budget

1. Budgeted Income Statement
   a. Revenue budgets-
      Sales, contracts, services, etc.
   b. Production budget supported by:
      Materials budget
      Direct labor budget
      Contract or shop overhead budget
      Inventory budget
2. Cost of goods sold budget
3. Contract (or selling) expense budget
4. Administrative expense budget

Financial Budget

1. Cash budget showing:
   a. Receipts
   b. Disbursements
2. Budgeted balance sheet*
3. Budgeted statement of sources and applicants of funds*

*Examples of these statements are found in Chapters 5 & 6 of this manual and will not be dealt with here.

As we have seen, the operating budget is not really a separate, distinct budget. It is made up of a number of sub-budgets that give a detailed breakdown of the revenues and expenses of the organization. However, many facilities only use a budget work sheet similar to the one found in Exhibit 4-5.

The following is a discussion of the content and utilization of the budgets and sub-budgets categorized in Exhibit 4-6.

Operating Budget

Budgeted income statement. The budgeted income statement (see Exhibit 4-7) summarizes the income and costs of producing the income projected (or achieved) for the various facility cost/revenue centers. The budgeted income statement is supported by various sub-budgets and also displays the actual or predicted total net income (loss) for the facility. Reasons for any net income (loss) would come from the analysis of one or more of the supporting budgets, as will be seen later.

EXHIBIT 4-7

Budgeted Income State

FACILITY X

Budgeted Income Statement
Year Ending ___

	From Sub-Budget		
Contract Revenue	2	$307,500	
Cost of Contracts Produced	9	255,300	
Margin		52,200	
Contract Procurement and Administrative Expense	10	70,500	
Net Income (loss)			$(18,300)
Service Revenue	1	$ 67,500	
Service and Administration Expense	11	87,800	
Net Income (loss)			$(20,300)
Contributions			$ 17,000
TOTAL (loss)			$(21,600)

Note: A budget for the solicitation of contributions was not devised but would be used and would show related expenses. Here we are assuming the $17,000 was received at no expense to Facility X.

Sales or revenue budgets. These budgets are generally projected for each month or quarter during the budget period and show the expected revenue for the period. Exhibits 4-8 and 4-9 show the projected contract and service revenues by quarter for a given year.

EXHIBIT 4-8

Revenue: Contract Budget

FACILITY X

Contract Budget by Quarter
For Year Ending ___

Sub-Budget 3

	Quarter				
Contracts	1	2	3	4	Total
X	$ 30,000	$ 26,000	$ 29,000	$ 35,000	$120,000
Y	45,000	46,000	42,000	47,000	180,000
Z	1,500	2,000	2,500	1,500	7,500
TOTAL	$ 76,500	$ 74,000	$ 73,500	$ 83,500	$307,500

EXHIBIT 4-9
Revenue: Services Budget

FACILITY Y

Service Budget by Quarter
For Year Ending ____

Sub-Budget 4

Services	Quarter 1	2	3	4	Total
Vocational Eval	$ 5,625	$ 5,625	$ 5,625	$ 5,625	$22,500
Adjustment Svcs.	6,750	6,750	6,750	6,750	27,000
Residential	4,500	4,500	4,500	4,500	18,000
TOTAL	$16,875	$16,875	$16,875	$16,875	$67,500

Actual revenue can then be tracked monthly or quarterly against planned performance. Negative variances from the projections can be noted early enough to avert serious financial or cash flow problems (see comments on budget analysis later in the chapter).

Production budgets. In the case of prime manufacturing or contract operations, where work is done on a regular basis for various customers, the production budget displays how many units of each product are to be manufactured or completed to meet the requirements portrayed in the revenue budget. Exhibit 4-10 shows the number of units and the unit selling price that must be obtained to generate the total revenue displayed in the contract revenue budget. Similarly, Exhibit 4-11 displays

EXHIBIT 4-10
Revenue: Contract Budget

FACILITY X

Contract Revenue Budget
For Year Ending ____

Sub-Budget 2

Contracts	Units Produced	Selling Price/Unit	Total Revenue
X	240,000	$ .50	$120,000
Y	600,000	.30	180,000
Z	500	15.00	7,500
TOTAL			$307,500

the units of services and related fees that must be obtained to meet the total revenue displayed in the service revenue budget. The service budget would be drawn up assuming a certain client/staff ratio. Changes in the expected client/week figure would have implications for facility staff allocations. For management purposes,

EXHIBIT 4-11
Revenue: Services Budget

FACILITY X

Service Revenue Budget
For Year Ending ____

Sub-Budget 1

	Clients/ Wk	No. Units	Fee	Total Revenue
Vocational Eval	5	225/wks	$100/wk	$22,500
Work Adjustment	10	540/wks	50/wk	27,000
Residential Unit	8	360/wks	50/wk	18,000
TOTAL				$67,500

these budgets show how changes in units produced, or in income per unit, effect total revenue. For production settings involving the recycling of donated goods, units must be assigned a value before they are sold (e.g., clothing, furniture). Goodwill Industries of America has an excellent method for developing sales and production budgets related to this type of operation.[2] Other less commonly used budgets prepared in support of the production budget are the direct materials, inventory, and direct labor budgets.

The direct materials budget shows the materials that must be purchased to meet various contract or prime manufacturing requirements (see Exhibit 4-12). This budget would most likely be generated in facilities engag-

EXHIBIT 4-12
Expense: Direct Materials Budget

FACILITY X

Direct Materials Usage Budget
For Year Ending ____

Sub-Budget 5

Direct Materials	Cost	Contract X	Y	Z	Cost of Materials
Plastic Bags— 1 unit/ product	$ .05	240,000			$12,000
Clips— 3 units/ product	.01		600,000		18,000
Board Feet— 15 units/ product	.50/bf			500	3,750
TOTAL					$33,750

ing in prime manufacturing. As in most contract operations, the contractor supplies the necessary materials. The

[2]Persons interested in obtaining more information on production budgets should contact Goodwill Industries of America, Inc. and inquire about their training package entitled Budgeting and Planning Seminar.

direct materials budget reflects changes in production costs due to changes in material cost or material usage, and can be used to project the effects that changes in these areas could have on future production costs.

The inventory budget is used to project the cost and amount of material inventories necessary to maintain desired contract/production operations. Exhibit 4-13 is a simplified example of an inventory budget that displays the projected cost of materials for the three production operations involved. Notice that no ending inventories are projected, except in the case of contract Z, where

EXHIBIT 4-13
Expense: Inventory Budget

FACILITY X
Inventory Budget
For Year Ending ___

Sub-Budget 6

	Contract X	Contract Y	Contract Z	Total
Desired Ending Materials Inventory in Units	-0-	-0-	500	
Units needed for production	240,000	1,800,000	7,500	
Total Needed	240,000	1,800,000	8,000	
Less Beginning Inventory in Units	-0-	-0-	500	
Units to be purchased	240,000	1,800,000	7,500	
Unit Price	$ .05	.01	$ .50	
TOTAL	$ 12,000	$ 18,000	$3,750	$33,750

beginning and ending inventories are constant. It does not deal with the costing of inventory over time or with the difference between raw materials and goods in process. Again, as materials are provided in most contract operations, inventory budgeting is not dealt with indepth.[3]

The direct labor budget is perhaps one of the most important of the production budgets because it generally reports the largest production cost. It is also one of the most useful budgets to the production manager since utilization of available labor is at the core of production scheduling. Exhibit 4-14 shows the amount of time required to produce the required number of production units at a normal work rate. The information displayed under the column "Direct Labor per Unit" shows the number of units that should be produced in an hour at 100 percent of the standard work rate.

EXHIBIT 4-14
Expense: Direct Labor Budget

FACILITY X
Direct Labor Budget
For Year Ending___

Sub-Budget 7

Contract	Produced	Direct Labor per Unit	Total hrs. Required	Budget at $3.25/hr.
X	240,000	13 units/hour	18,460	$ 60,000
Y	600,000	21.7 units/hr	27,650	90,000
Z	500	1 unit/2.3 hr	1,154	3,750
TOTAL			47,264	$153,750

The budgeted minimum hourly wage rate was shown as $3.25 per hour. However, the commensurate wage rate for each contract should always be used. This budget can be used to analyze the effect(s) on direct labor costs resulting from changes in productivity requirements, client productivity, or wage rates.

Contract and Service Overhead Budget. These two overhead budgets, Exhibits 4-15 and 4-16, show the actual allocation of indirect costs to the facility's programs (administrative costs were not included here).

EXHIBIT 4-15
Contract Overhead Budget

FACILITY X
Contract Overhead Budget
For Year Ending ___

Sub-Budget 8

Supplies	$10,000	
Indirect Labor	5,000	
Payroll Fringe	500	
Utilities (variable)	1,000	
Total Variable Overhead		$16,500
Professional Salaries	$25,000	
Depreciation	9,500	
Insurance	1,800	
Supervision	3,000	
Utilities (fixed)	3,000	
Maintenance	6,000	
Equipment	3,000	
Total Fixed Overhead		$51,300
TOTAL		$67,800

[3]Those interested in a more comprehensive treatment of inventory budgets are referred to the *Harvard Business Review* (1975), Health (1978), Horngren (1972), or Jones and Trentin (1966).

EXHIBIT 4-16

Service Overhead Budget

FACILITY X

Service Overhead Budget
For Year Ending ___

Sub-Budget 8A

Supplies	$3,000	
Indirect Labor	2,000	
Payroll Fringe	500	
Total Variable Overhead		$ 5,500
Equipment	$2,000	
Depreciation	5,000	
Insurance	600	
Supervision	4,000	
Utilities	1,000	
Maintenance	2,000	
Total Fixed Overhead		$14,600
TOTAL		$20,100

Overhead costs are shown as either variable or fixed, and represent overhead charges that can be traced directly to the programs in question. Management could also choose to hold program directors accountable for the variable costs involved since they have input and authority over these costs.

Cost of Production Operation Budget. Exhibit 4-17 shows the computation of total contracting/production costs before adding indirect administrative expenses, or the costs of procuring and contract work. As indicated by the note to the Exhibit, inventory costs would also be added here if appropriate. Since the workshop overhead cost can be considered as direct overhead, it could be said that this budget shows the direct cost of contract operations.

EXHIBIT 4-17

Cost of Contracts

FACILITY X

Cost of Contracts
For Year Ending ___

Sub-Budget 9

	From Schedule	Total
Direct Material Used	5	$ 33,750
Direct Labor	7	153,750
Workshop Overhead	8	67,800
TOTAL		$255,300

NOTE: Assuming no finished goods on hand, if inventory exists, then the increased value of the present year's ending inventory or the previous years ending inventory must be subtracted from total contract costs.

Sales Contract Procurement Expense. Exhibit 4-18 shows the cost of contract procurement and the administrative expense budget. This budget treatment essentially breaks out the cost of selling prime products or procurring contract work from the cost of doing the budgeted income statement. The major benefit of treating contract procurement, sales, and indirect administrative expense in this manner is that it keeps the costs of production "clean," and allows the cost of soliciting contracts to be kept separate from the cost of doing the work, thus allowing for more control over costs generated in this area. It also allows administrative costs absorbed by contract/production operations, to be kept separate from the direct contract costs. This in turn allows for a more precise analysis of the cause and effect relationships between contract production operations, contract procurement operations, and absorption of administrative (indirect) overhead.

EXHIBIT 4-18

Cost of Contract Procurement

FACILITY X

Contract Procurement & Administrative Expense Budget-Year Ending ___

Sub-Budget 10

Commission on Contracts	$15,000	
Advertising	2,000	
Contract Procurement Salaries	5,000	
Travel	1,000	
Total Procurement Costs		$23,000
Clerical Costs	$ 7,500	
Administrative Salaries (absorbed)	38,000	
Miscellaneous (commodities)	2,000	
Total Administrative Costs		$47,500
TOTAL		$70,500

Exhibit 4-19 is the combination of a cost of service budget and a distribution of administrative expense budget. It shows the direct costs of services in combination with administrative overhead expenses. Administrative expense budgets, as portrayed in Exhibits 4-18 and 4-19, show how administrative overhead is distributed as a part of overall production and service costs. As stated previously, they show the distribution of the facility's in-

direct overhead, or costs that cannot be directly allocated to the programs in question. These costs include expenses related to the executive director, accounting, public relations, personnel management, rehabilitation management, the cost of facility membership dues, and accreditation.

Another way of showing how administrative costs might be distributed to show total program costs is demonstrated in Exhibit 4-20. It should be noted that, in this example, only administrative salaries are distributed, with other costs being directly allocated to the various cost/revenue centers. The reason for not showing administrative allocation for maintenance, insurance, supplies, and so on, is that such amounts are generally relatively small, and accounting for them is often not cost effective. By far, the most significant administrative cost in most facilities is administrative salaries. Therefore, it is the only administrative line item allocated across the various programs. The allocation is made on the basis of the percent each program's budget is of the total program budget, less administrative salaries. For example, the workshop budget makes up a little over 79 percent of the total program budget (less administrative salaries), so approximately 79 percent of administrative salaries is allocated to the workshop. The logic behind this allocation method is that since administrative costs essentially support the operation of the facility as a whole, these costs should be allocated on the basis of the operational costs of each program. If it was necessary to make a more detailed analysis of administrative spending in other areas, a more

EXHIBIT 4-19
Service and Administrative Expenses

FACILITY X
Service and Administrative Expense
Budget-Year Ending ___

Sub-Budget 11

Professional Salaries	$40,000	
Travel	1,200	
Service Overhead (Schedule 8A)	20,100	
Total Service Costs		$61,300
Clerical Wages	$14,500	
Supplies	2,000	
Administrative Salaries (Absorbed)	10,000	
Total Administrative Cost		$26,500
TOTAL		$87,800

EXHIBIT 4-20
Administrative Cost Absorption

FACILITY X
Budget Worksheet Showing Absorption of Administrative Cost
For Year Ending ___

Costs	Adm.	Eval.	Adj. Serv.	Wkshp.	Resid	Total
Salaries	$55,000	$15,000	$ 15,000	$ 30,000	$ 10,000	$125,000
Commissions				15,000		15,000
Housekeeping		500	500	5,500	1,500	8,000
Maintenance		500	500	6,000	1,000	8,000
Travel		400	400	1,000	400	2,200
Clerical Costs		7,000	5,000	7,500	2,500	22,000
Supplies		3,000	1,000	10,000	1,000	15,000
Materials				33,750		33,750
Client's Wages				153,750		153,750
Advertising				2,000		2,000
Insurance		150	150	1,800	300	2,400
Depreciation		1,500	500	9,500	3,000	14,500
Utilities		200	200	4,000	600	5,000
Equipment		1,500		3,000	500	5,000
Miscellaneous				2,000		2,000
	$55,000	$29,750	$ 23,250	$284,800	$ 20,800	$413,600
Dist of Adm Costs		4,575	3,585	43,700	3,140	
TOTAL		$34,325	$26,835	$328,500	$ 23,940	$413,600
Income						
Services		$22,500	$ 27,000		$ 18,000	$ 67,500
Contracts				$307,500		307,500
Contributions	$17,000					17,000
TOTAL	$17,000	$22,500	$ 27,000	$307,500	$ 18,000	$392,000
Excess of Income Over Expenses						$(21,600)

detailed listing of administrative costs and expenditures would be necessary.

Financial budget

The financial budget shows how operations will effect the facility's basic resources and liabilities, and generally consists of the cash budget, budgeted balance sheet, and statement of sources and uses of funds. The balance sheet, and sources and uses of funds were fully discussed in Chapters 5 and 6.

Cash budget

The cash budget portrays the projected flow of income and expenses for each month or quarter of the budget year (see Exhibit 4-21). It essentially helps facility management locate and deal with cash flow problems far enough in advance so the facility's program operates smoothly and without interruption. Examination of Exhibit 4-21 shows the anticipated receipts and disbursements of Facility X, and the amount of cash needed each quarter to cover all disbursements and allow for a $5,000 minimum cash balance at the beginning of each quarter. It can be readily seen that Facility X could not cover its anticipated disbursements for the first three quarters and had to borrow $26,511 over this period to maintain adequate cash flow. An excess of income over expenses of $4,911 is anticipated during the fourth quarter. It will be used to pay back part of the loan, thus showing outstanding loans of $21,600 at the end of the year. The advantage, of course, of being able to forecast cash flow problems is that contracts with financial institutions to cover projected deficits can be made far enough in advance so as not to interfere with the facility's operation. The projection allows for a more accurate estimation of when the loan may be paid back, an item of particular interest to the institution lending the money. The cash flow budget also shows whether capital expenditures such as equipment purchases can be financed internally. Facility X plans to spend $5,000 on equipment in the third quarter. A look at the budget shows that such a purchase will have to be financed through borrowing, along with the rest of the facility's deficit for that quarter. Another use of the cash flow budget may be to project the availability of extra cash that might be put into short term investments, or in some cases, even long term investments. It is important to note that cash flow forecasting should be done at intervals during the year that will allow the facility to be aware of peaks and valleys of revenue and expense activity; a facility must be solvent continuously, not just in the beginning and end of the year.

EXHIBIT 4-21
Cash Receipts and Disbursements

FACILITY X

Budget Statement of Cash Receipts and Disbursements—For Year Ending ____

	Quarters				Year as a Whole
	1	2	3	4	
Cash Bal-Beginning	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000
Add Receipts:					
Contracts	76,500	74,000	73,500	83,500	307,500
Services	16,875	16,875	16,875	16,875	67,500
Contributions	2,000	3,000	2,000	10,000	17,000
Total Available	$100,375	$ 98,875	$ 97,375	$115,375	$397,000
Less Disbursements:					
Materials	$ 8,437	$ 8,437	$ 8,437	$ 8,439	$ 33,750
Other Costs	12,775	12,775	12,775	12,775	51,100
Payroll-Client	38,250	37,000	36,750	41,750	153,750
Payroll-Ser. & Adm.	17,750	17,750	17,750	17,750	71,000
Payroll-Wkshp. & Adm.	21,000	21,000	21,000	21,000	84,000
Commissions	3,750	3,750	3,750	3,750	15,000
For Equip. Purchase			5,000		5,000
Total Disbursements	$101,962	$100,712	$105,462	$105,464	$413,600
Minimum Cash Balance Required	5,000	5,000	5,000	5,000	5,000
Total Cash Needed	$106,962	$105,712	$110,462	$110,464	$418,600
Excess or (Deficiency) of Cash Needed	$ (6,587)	$ (6,837)	$(13,087)	$ 4,911	$(21,600)
Financing:					
Borrowed	$ 6,587	$ 6,837	$ 13,087		$ 26,511
Repayment				$ 4,911	4,911
Total Financing	$ 6,587	$ 13,424	$ 26,511	$ (4,911)	$ 21,600
Cash Balance	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000

NOTE: Statement does not include cost of financing which would be added as a financing cost.

Budget Analysis

Budget analysis, or budget control, is the process of checking actual revenue and expenses against those projected for a given budget period. The difference between the budgeted figure and actual achievement is known as the variance (favorable or unfavorable). If the variance is more than some predetermined percent of the original budgeted estimates, an explanation of the cause for variance is required.

Exhibit 4-22 shows three different ways of reviewing budgeted outcomes for client services. In the first example, both evaluation and work adjustment were not provided for the number of weeks budgeted, and work adjustment was 11 percent under budget. Possible explanations are that referrals were down or that clients where not staying in the service programs for the average number of weeks planned. The "Client Referrals" category got one more client than was budgeted, which suggests that clients were not staying in evaluation for the planned number of weeks. In work adjustment, however, referrals are down from the number expected. The effect on service in income work adjustment, while not in the danger zone as far as total income for the quarter is concerned (assuming a 10% red flag), is cause for concern in all three categories of the Exhibit.

In Exhibit 4-23 (a review of direct labor utilization), the units produced for contracts X and Y are down significantly from projected levels, while production for Z is up 10 percent. Analysis of the direct labor expended per unit and labor hours available, indicates that although labor hours available are about what was projected, unit productivity per hour was significantly lower for contracts X and Y and, thus, would account for most of the variance in overall units produced. Reasons might be that the production standard was set too high or that the average client's productivity, as related to the industrial norms, was not as high as originally estimated. Or perhaps, some

EXHIBIT 4-22
Client Services

FACILITY X

Rehabilitation Services
Review of Client Services
Period/Quarter 1

	Budgeted	Actual	Variance Fav. (Unfav.)	% Variance
Client Weeks				
Vocational Eval	56 weeks	54 weeks	(2) weeks	(4)
Work Adjustment	135 weeks	120 weeks	(15) weeks	(11)
Residential	90 weeks	90 weeks	0 weeks	0
	281 weeks	264 weeks	(17) weeks	(6)
Client Referrals				
Vocational Eval.	11 clients	12 clients	1 clients	9
Work Adjustment	12 clients	10 clients	(2) clients	(17)
Residential	8 clients	8 clients	0 client	0
	31 clients	30 clients	(1) client	(3)
Service Income				
Vocational Eval.	$ 5,600	$ 5,400	$(200)	(4)
Work Adjustment	6,750	6,000	(750)	(11)
Residential	4,500	4,500	0	0
	$16,850	$15,900	$(950)	(6)

NOTE: Unfavorable variance is indicated by numbers in parenthesis.

thing happened in the production flow that slowed client productivity. The fact that clients on contract Z increased their productivity by 20 percent with essentially the same number of labor hours available could suggest increased learning or, perhaps, a more efficient means of production was found.

In summary, variance analysis helps the feedback process by directing attention to areas most in need of investigation. Unfavorable variances might suggest that predictions were set inappropriately, or that some aspect of operations is not being performed properly. Machine breakdowns, excessive personnel or client absences, or implementation of new procedures can have an adverse effect on the efficiency and effectiveness of the facility's operations. In the final analysis, however, deciding what to do about variances is one of the most important aspects of facility management. The concepts of participative, functional budgeting presented in this chapter should promote fiscal awareness and responsibility among all levels of facility management. If used in a positive manner, it will make the many tasks of budget development and control easier for everyone involved, especially the facility administrator.

EXHIBIT 4-23
Direct Labor

FACILITY X

Production Department
Review of Direct Labor - Quarter 1

Units Produced	Budgeted	Actual	Varience Fav. (Unfav.)	% Variance
X	60,000	45,000	(15,000)	(25)
Y	150,000	130,000	(20,000)	(13)
Z	100	110	10	10
Direct Labor/Unit				
X	13/hr	10	(3)	(23)
Y	22/hr	19	(3)	(13.6)
Z	1/2.3 hr	1/2 hr	20m/unit	14
Labor Hours Available				
X	4615	4600	(15)	(.003)
Y	6912	7000	88	.01
Z	2308	2300	(8)	(.003)
TOTAL	13835	13900	65	(.005)

Exercises

1. What is the major benefit of relating the budget process to program planning?

2. Make up a decision package, using the outline by McCandless on page 44, related to some programmatic decision of your choice.

3. Identify the levels of budgetary control you might use if you were to implement a responsibility budgeting system in your facility.

4. Name at least five variables that might effect your facility's income from services.

5. Given the following information, complete the number of production hours available for workshop Y at 80 percent utilization and the amount of yearly income necessary to meet wage and operations expense when overhead is 110 percent of total production wages:

   Shop Y

   Assumptions:

   * 75 clients daily (average) attendance
   * shop in operation 48 weeks/year, 5 days/week
   * clients are 60 percent productive on the average
   * clients spend 4.5 hours in work and 3.5 hours in other activities/day
   * average commensurate wage paid = $3.50/hr

6. Indicate which of the following are variable costs and which are fixed costs, and why.

   Professional salaries

   Client wages

   Insurance

   Utilities

   Supplies

   Depreciation

7. If it costs $3,000 to operate a program before clients are served, and for every client served it costs an additional $100, at fees of $200/client, how many clients will have to be served before the program will break even? Construct a break-even cost analysis to compute the answer.

8. How will the following conditions effect Facility X's annual service revenue budget (see Exhibit 4-11):

   a. clients spend 2 weeks longer in evaluation than planned

   b. two fewer clients are served in adjustment services than planned

9. What effect will a 10 percent material waste in contract Y have on Facility X's direct materials usage budget (see Exhibit 4-12)?

10. What impact will the decision to maintain an inventory of 150,000 units of materials for contract Y (see Exhibit 4-13) have on Facility X's inventory budget?

11. Name at least three variables that could have a significant effect on Facility X's direct labor budget (see Exhibit 4-14)?

    Discuss the program effects.

12. What effects would the following have on Facility X's cash flow (see Exhibit 4-21):

    a. A fourth quarter slump of 20 percent in contract operations.

    b. A decision to increase fees for service by 10 percent.

Answers to Exercises

1. It allows for the projection of cost and revenues based upon projections of planned program outcomes. Program decisions can then be examined in relation to the overall facility budget; variations from planned outcomes can be monitored fiscally as well as programmatically.

   (See page 43)

2. Package should contain all elements described by McCandless.

   (See page 44)

3. Check your answer by determining if persons at all levels you identified have, or could have, control over related expenses and revenues.

   (See page 46)

4. Client referrals

   Fees for service

   Increase or decrease in client/staff ratio

   Client absenteeism

   Units of service available

   (See page 48)

5. Seventy-five clients × 48 weeks × 22.5 hrs/wk × .60 prod × .80 utilization =

   38,880 hrs. available.

   38,880 × $3.50 = $136,080 in client wages
   149,688 for overhead (110% of client wages)
   Total $285,768 for client wages and overhead

   (See page 49)

6. *Professional salaries*—Fixed. Because salaries do not vary with the number of clients served (salaries as a whole do vary of course if total number of staff are increased or decreased, but an individual salary does not normally vary with client load).

   Client wages—Variable. Amount paid in wages varies with the number of hours clients work.

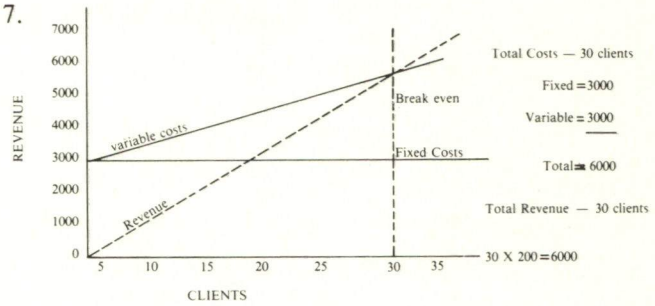
   Insurance—Fixed. Insurance costs are generally fixed for a specific time period and vary only in relation to some predetermined set of conditions. The increased or decreased rate related to these conditions are, however, fixed.

   Utilities—Variable. The cost of gas and electric power vary directly with the amount used.

   Supplies—Variable. The cost of almost all categories of supplies vary with the amount of supplies used.

   Depreciation—Fixed. The depreciation schedules fix the rate and thus the amount of depreciation during any given period of time.

   (See page 50)

7. 

   (See page 50)

8. a. No effect—fee is based on client weeks not number of weeks per client.

   b. Eight clients × 54 weeks × $50/wk = $21,600 or a decrease of 5400 in client revenue in adjustment services.

   (See page 54)

9. An additional 60,000 units at .01/unit will have to be purchased, increasing the cost of materials for contract Y by $1,800, and reducing the margin from contract income to $50,400 *(see Exhibit 4-12)*.

   (See pages 53-54)

10. An additional 150,000 units will have to be purchased at the cost of $1,500 which will increase the inventory budget to $35,250. This in turn will increase, by $1,500, the money the agency will need to borrow to maintain an adequate cash flow (see Exhibit 4-21, inventory line.)

    (See pages 55; 59)

11. a. Client productivity may go down, resulting in fewer units produced. This *will not*, however, effect the direct labor cost per unit since it is based on normal, nonhandicapped production hours. The direct overhead costs per unit would be increased, however, since the same amount of supervision, space, administration, and so on, would be used to support less productivity.

    b. Production standards could change due to more or less efficient production methods. Changes would affect the direct labor necessary per unit, either increase or decrease the total hours required, and increase or decrease the total production budget.

    c. The minimum wage rate or commensurate wage rate may go up, thus increasing the direct labor budget.

d. The requirements for number of units produced may go up or down, causing an increase or decrease in the total hours required, effecting the total budget accordingly. Again many overhead costs will remain about the same and a workshop would have to find other revenue producing activities for available but unused labor hours if a positive fiscal position is to be maintained *(see Exhibit 4-14)*.

(See page 55)

12. a. A fourth quarter slump of 20 percent in contract operations would cause a decrease in total revenue for that quarter of $16,700 ($83,500 × .20). This in turn would cause a deficiency of cash needed in the amount of $11,789 ($110,464 – $98,675, the adjusted total revenue available for the quarter). The facility would not be able to make a payment to the bank and in fact would have to borrow an additional $11,789, raising its total financing for the year to $38,300.

b. An increase in service fees of 10 percent would increase the total available cash by $6,750, and would have reduced the amount borrowed by $1,687.50 for each quarter, thus having the cumulative effect of reducing the total financing by $6,750, for a total of $14,850, assuming the funding source would pay the increased fee and continue at the optimum rate of utilization.

(See page 58)

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ACCOUNTING

The American Institute of Certified Public Accountants (AICPA) defined accounting in 1941 as:

> The art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are, in part, of a financial character and interpreting the results thereof. (AICPA, 1961, p.9)

The purpose of accounting is to accumulate financial data, communicate the true financial condition of the entity, and allow for interpretation and related corrective action. Any entity, for-profit or not-for-profit, operates on a financial base which allows for its continuation and, to some extent, provides a measure of its relative success. Thus, accounting provides a somewhat standardized approach to assessing the overall financial health of an entity, and insights as to how that might be improved.

Accounting can be subclassified into two types: financial, and cost or managerial. Financial accounting, used primarily for external reporting purposes, is a relatively standardized method for representing the financial condition of the entity. Cost or managerial accounting provides insights for management relative to improving the financial condition of an organization and, as such, serves primarily internal reporting needs. Historically, both types of accounting, have been used primarily in the for-profit sector; thus, much of what has been developed relates to a for-profit logic. Therefore, there are some differences in accounting for the not-for-profit sector which must be considered.

Some Differences in For-Profit and Not-for-Profit Accounting

As we attempt to understand the differences between for-profit entities and not-for-profit entities, the nomenclature itself can be quite misleading. A frequent misconception is that the difference is simply that the former produces a profit and the latter does not. Either entity can, and should at times, produce revenue in excess of expenses or, in other words, profit. What, then, are the differences? They vary in relation to the purpose of the entity and what is done with the surplus (profit). The purpose of a for-profit entity is to produce a return (profit) on the investment of the shareholders (owners). The purpose of a not-for-profit entity is to accomplish some sanctioned social purpose, for example, health, welfare, education, religion, research. All or part of the profits are returned to the owners/investors in the for-profit entity. By law, surpluses/profits of a not-for-profit entity cannot go back to the board/owners. Instead, they must be reinvested in the entity (for the purpose established) or they can be held in reserve (within certain legal limits) for future periods. The major differences in accounting for such entities relate directly back to these differences.

The concept of fund accounting is virtually nonexistent in the for-profit sector. In the not-for-profit sector, however, it is becoming an increasingly popular and generally accepted practice to use fund accounting. By definition, a fund is a sum of money or other assets which constitute an independent accounting entity, established and maintained for a specific purpose (Goodwill Industries of America, not dated). A not-for-profit entity by the very nature of its operation, uses assets which have varying degrees of restriction associated with them. Fund accounting simply groups these assets into funds which have similar purposes and degrees of restrictions. To group them into one fund would distort the true financial condition of the entity. For example, to include the assets of government grants and general operational assets in the same fund would give the impression that all assets are available to meet general agency needs which, of course, they are not. Thus, fund accounting produces a financial report that more accurately reflects reality for the not-for-profit entity (Hertzlinger & Sherman, 1980). Some managers and accountants feel, however, that such an approach unnecessarily complicates the financial picture for a given not-for-profit agency (Anthony, 1980). Even though there is some disagreement, *most* experts support fund accounting for nonprofit organizations.

The concept of functional accounting is simply to classify expenses and revenues, and report them according to a general purpose, service, or need to be accomplished by the entity. Functional accounting may also classify expenses and revenues by fund and object (nature of the expenditure). The development of functions in the not-for-profit sector is quite similar to the establishment of cost centers or departments in the for-profit sector.

The acquisition of a fixed asset in the for-profit sector evolves, from an accounting point of view, around estimating the value of the fixed asset and carrying that value on the balance sheet until it is fully used. It must be carried over its expected life in a way that most accurately reflects the expense (depreciation) at the time the revenues it produces are generated. To the extent that the source of fixed assets is not related to general operations, this treatment should not be used in a not-for-profit entity as a part of the unrestricted general fund. In other words, these fixed assets should not be valued on the balance sheet as a part of the unrestricted general fund. Some modifications become necessary to present this information in a financially accurate fashion. For example, a popular and prudent practice is to show the value of the fixed asset in a restricted land, building and equipment fund, and charge the unrestricted general fund for depreciation so as to create a replacement reserve.

It is not uncommon to have transfers between funds in a not-for-profit entity which would not occur in a for-profit since the concept of funds is not used in that sector. It has, therefore, become necessary to develop a method for showing these transactions without giving the false impression of increasing or decreasing equity. Also, not-for-profits receive donations of cash, goods, and in-kind services which are quite material to full disclosure but virtually unheard of in the for-profit sector. This requires the development of standards which reflect the value of these receivables or actual donations without distorting the true financial condition of the organization (Gross & Warshauer, 1979).

General Accounting Concepts

To understand accounting and the resulting financial reports for any type of organization, it is essential to understand several key concepts. The first is entity. An entity, from an accounting point of view, is that basic enterprise about which we are trying to report. It has some form of legal existence, for example a proprietary unit, a for-profit corporation, a not-for-profit corporation, a public or a political division. Each has certain legal characteristics and a certain amount of separation from the financial affairs of its owners and/or board members. The entity is capable of engaging in a variety of legal and business transactions, that is, buying, selling, and other economic actions which can be separated from the private or personal affairs of those charged with its administration. Thus, a rehabilitation facility, which is incorporated as a not-for-profit corporation, can obtain bank loans, purchase goods on account and sell services in its own right. These transactions must be kept separate from the personal finances of the facility's executive director and members of the board of directors.

Another important concept for financial accounting is the basis upon which it is accomplished. There are generally two primary methods of accounting: cash and accrual. The major distinction between the two is the timing of reporting expenses and revenues. The most common basis for accounting for personal finances is the cash basis, that is, recording revenues when they are received and expenses when they are paid. For anyone who has maintained a personal checkbook, this is the logic most frequently employed. To the nonaccountant, this method may seem most reasonable to use for a facility. However, upon careful examination, it shall be noted that this can lead to material distortions in the actual financial condition of the facility. Take the example in which a facility reporting on a cash basis reports a cash surplus of $5,000.00 at the end of the month. This would give the impression that the facility is in good financial condition. However, if it owes $15,000.00 to creditors, the actual end of the month financial condition would be a $10,000.00 deficit. The same situation can be illustrated with regard to revenues. If the facility shows a $5,000 deficit at the end of the month but has $15,000.00 owed to it, when paid, there will be a $10,000.00 surplus. In both instances, if the executive director had to make financial decisions with only the information available through the cash basis of accounting, those decisions would frequently not be in the best interests of the facility, since they were based on only partial information.

The accrual basis for accounting corrects these situations. Expenses are recorded when they become owed by the facility, and revenues are recorded when they become owed to the facility. This creates the concepts of payables (amounts which are legally owed by the facility but which have not yet paid), and receivables (amounts which are legally owed to the facility but which have not yet been received). This method of accounting has the advantage of more accurately reflecting the true financial condition of the facility and also of showing expenses in closer proximity to the revenues they produced.

In order to accomplish accrual accounting, it is necessary to use a double entry system of bookkeeping. This system is tied to the basic accounting equation:

Assets (A) − Liabilities (L) = Equity (E)

The equation illustrates that if you take what you have (assets) and subtract the amounts owed (liabilities), the

result is what the entity owns (equity). While the equation stated in that form is easiest to understand conceptually, it is not the most convenient form for actual accounting. To obtain the most useful accounting equation, it is necessary to add liabilities to both sides of the equation. In an algebraic operation, this does not change the equation in substance, only form. The resulting equation is as follows:

$$A(-L + L) = L + E, \text{ or } A = L + E$$

The double entry bookkeeping system simply reflects the need to keep this equation in balance at all times. For every bookkeeping entry made, there must be a corresponding entry that keeps the equation in balance. Thus, if the facility acquires an asset, such as a raw material inventory, an increase in a liability (accounts payable), an increase in revenue as in the case of a donation, or a decrease in cash (or some other asset) must be shown in order to keep the equation in balance.

Accountants have developed a double entry system that quite conveniently keeps the equation in balance as every transaction is recorded. Thus, for every entry there must be a debit (an entry on the left side) and a credit (an entry on the right side). The effect of a debit or credit entry is based on the type of account being used, that is, asset, liability, or equity. Debit entries increase assets but decrease liabilities and equity. Credit entries decrease assets but increase liabilities and equity. Thus in the example above, if the facility purchases raw material on account in the amount of $100, the journal entry would look like this:

Account	Debit	Credit
Raw Materials Inventory (A)	$100.00	
Accounts Payable (L)		$100.00

If, on the other hand, the transaction had been accomplished with cash it would have been as follows:

Account	Debit	Credit
Raw Materials Inventory (A)	$100.00	
Cash (A)		$100.00

In both instances, the equation was maintained in balance but with two quite different results. In the first instance, the assets of the facility were increased by $100.00 but so were the liabilities in a like amount.

$$A + \$100 = (L + \$100) + E$$

In the second, we simply changed the forms of the assets, that is, increased inventory and decreased cash.

$$A\ (+\ \$100.00\ [\text{Inventory}] - \$100.00\ [\text{Cash}] = L + E$$

In neither case was the amount of equity/ownership changed.

The examples used so far have employed balance sheet accounts, that is, assets, liabilities, and equity. There are also operating accounts, that is, revenues and expenses. These accounts are special in the sense that they directly effect equity and in only one way: revenues only increase equity and thus are always credit entries; expenses only decrease equity and thus are always debit entries. In the case where the facility bills the Department of Rehabilitation Services for $1,000.00 of vocational evaluation services, an example of a revenue entry would be as follows:

Account	Debit	Credit
Accounts Receivable	$1,000.00	
Revenues		$1,000.00

In this case, the equity/ownership of the facility is ultimately increased by $1,000.00 as well as the assets (accounts receivable). An example of an expense entry would be if the facility consumed (used up) $500.00 worth of office supplies from its central supply (general stores) over the course of a month. The appropriate accounting entry would be as follows:

Account	Debit	Credit
Expense	$ 500.00	
Supply Inventory		$ 500.00

In this case, the equity/ownership of the facility is decreased by $500.00 and the amount of assets are decreased by $500.00.

Two last concepts necessary to understand accrual accounting are those of prepayments and deferred liabilities. Certain types of expenses must be prepaid by the facility, such as insurance and rent. To obtain the desired insurance protection, the facility must pay the entire premium for several months or years in advance. Let's examine the situation in which the facility wants to provide bonding for its employees through a Commercial Blanket Bond. The insurance company, after reviewing the application, determines that it will provide this coverage for the facility at a cost of $1,080.00 for a three-year period, which must be paid in full in advance. This presents a slightly different accounting problem; if this entire transaction were shown as an expense when it was paid, it would distort the expenses for the period (the month in which it was paid). It would appear that the entire expense occurred in that month when, in fact, it really should be spread over the full three-year period of coverage. The accrual accountant views this transaction initially as the purchase of an asset (prepaid insurance or three years of protection) and shows expenses against it for the life of the coverage. Thus, the initial purchase would be handled as follows:

Account	Debit	Credit
Prepaid Insurance	$1,080.00	
Accounts Payable		$1,080.00

At the end of each month, the expense or using up of the asset would be treated as follows:

Account	Debit	Credit
Expense	$ 30.00	
Prepaid Insurance		$ 30.00

This results in the expense being reflected in the month it actually occurred or was used up. The facility shows the

remaining value of its insurance coverage during the interim under the asset account titled prepaid insurance.

A similar problem occurs when revenues are prepaid to the facility for services to be rendered at some future time. This is best illustrated in the situation where the facility sells subscriptions to a newsletter it publishes. If three-year subscriptions are sold, it would materially distort the financial report to show that full revenue in the month it was received or recognized, since the facility still has an obligaiton to produce the remaining issues over the three years to obtain that actual right to that income. In a sense, a liability has been established in that, if the remaining issues were not produced, the subscriber could quite likely obtain a court settlement for the return of some or all of the subscription cost. To handle this, the accountant establishes a deferred liability. If we assume that the facility publishes the newsletter monthly and charges $108.00 for three year subscritpion, the original payment would be treated as follows:

Account	Debit	Credit
Cash	$ 108.00	
Deferred Liability		$ 108.00

As each issue of the newsletter is issued, the transaction would be as follows:

Account	Debit	Credit
Deferred Liability	$ 3.00	
Revenue		$ 3.00

Both prepayments and deferred liabilities are accounting concepts used to cause expenses and revenues to be shown in the accounting records and reports when consumed or when earned by the facility. Moreover, the use of these concepts reflect the value of the prepayment of liability to produce some future product or service in the interim, and thereby have a material impact on the actual financial condition of the facility. Thus, accrual accounting requires the use of several intermediate concepts to produce accurate financial records and reports.

Financial Accounting

Financial accounting is performed by the facility to record and report material financial transactions for meaningful public disclosure of the financial condition of the facility. Most often that disclosure is designed to both reveal the actual financial condition at a given point in time, and to provide for a report of profitability for that period (the financial direction the facility is moving).

This section was not designed to prepare the reader to be an accountant since: 1) it would take considerably more time and resources than have been allocated to this project; 2) this type of general training is available in or near most communities having a rehabilitation facility, and there are good training materials available to a facility director for specific training related to rehabilitation facilties (see Chapter 1); 3) these skills are generally available to a facility either in the form of qualified staff accountants, or accounting consultants. Generally speaking, any CPA is qualified to set up an accrual accounting system that employs funds and functions, and produce the desired reports. The purpose of this section, then, is to familiarize facility executives with the components of such a system in order to promote better communication between accountants and themselves. It is hoped that the facility executive who lacks background in the financial area will gain a better understanding of accounting concepts and be more able to approach the process as a true participant after reading this section.

To understand financial accounting, it is first most helpful to understand the components of such a system, that is, chart of accounts, journal, ledger, and financial reports.

Chart of accounts. The chart of accounts is literally a catalog for classifying all transactions of the facility in a standardized fashion. It establishes accounts, their nomenclature, and numbering system for the facility. There is nothing magic or absolute about the chart. It should be established at the level of detail necessary for the executive to make financial decisions in the most informed manner possible and at the same time not be prohibitive in terms of the cost of using it. To that extent, the executive should have considerable input into its development while remaining cognizant of legal, funding source, board, and generally accepted accounting requirements. Most frequently, accounts are divided into balance sheet accounts, those necessary for the production of the balance sheet, and operating accounts (those accounts necessary to produce the operating statement).

Those accounts most frequently associated with the balance sheet include the following:

Assets

1. Cash
2. Checking Account
3. Savings Account
4. Certificates of Deposit
5. Marketable Securities
6. Accounts Receivable
7. Pledges Receivable
8. Supply Inventory
9. Raw Material Inventory
10. Goods in Process Inventory
11. Finished Good Inventory
12. Prepayments
13. Equipment Inventory
14. Land and Building Inventory

Liabilities

1. Wages Payable
2. Accounts Payable
3. Bank Note Payable

Equity

1. Fund Balance

Transactions related to the balance sheet are classified according to the fund they effect, and according to the proper account. Examples of the usual funds employed by a rehabilitation facility are:

1. Current General Fund: fund that contains no restricted assets and can be used by the board as it chooses to carry out the purposes for which the organization was founded.
2. Current Restricted Fund: fund that accounts for monies given to an organization to be spent as part of current activities for certain specified purposes, for example, a state or federal grant.
3. Unexpended Land Building and Equipment Fund: monies not yet expended and whose purpose is restricted to the acquisition of land, building and equipment.
4. Equity Fund: Land, Building and Equipment - a fund to account for the value of acquired land, building and equipment.
5. Endowment Fund: a fund in which the principle cannot be spent, only its earnings. Earnings may be unrestriced or restricted.
6. Fund Functioning as an Endowment: a fund set aside by the board which has the restrictions noted in number 5 above.
7. Custodian Fund: a fund to account for assets given the facility, only to be used for someone or something else.

Operating accounts are basically revenues and expenses. Transactions are classified by fund (see above), function, and object. Some typical functions a rehabilitation facility might use are:

1. Vocational Evaluation
2. Work Adjustment
3. Work Activities
4. Sheltered Employment
5. Contract Work
6. Job Development and Placement
7. Rehabilitation Counseling
8. Physical Restoration
9. Speech Pathology
10. Audiology
11. Administration
12. Occupancy

It should be noted that this list is likely to be the most variable among facilities since functions would reflect the basic services and purposes of the facility. As such, functions can and should be specific to that facility.

The third method of classifying expenses and revenues is with regard to the object or nature of the expenses and revenues. Thus, for expenses, objects could include the following:

1. Salaries
2. Wages
3. Staff Travel
4. Commodities
5. Contractual Services
6. Overhead

Objects of revenues could include:

1. Fees for Service
2. Grant Revenue
3. Specified Donations

Classifying transactions with the chart of accounts described above permits the facility to report all financial transactions by account, fund, function, and object. See Exhibit 5-1 for an example of a simplified chart of accounts for classifying expenses and revenues.

Journal. Once the transactions have been classified using the chart of accounts, they are recorded in chronological sequence in the journal. Each journal entry has a double entry indicating the accounts affected, the debit or credit, and, by definition, the impact of that entry on the account (increase or decrease). Thus, the journal is a record of the actual transactions and how they were classified. It provides the instructions for making the correct entries into the ledger (see Exhibit 5-2 for sample general journal entries).

Ledger. The ledger is a record of all facility accounts and reflects the entries posted from the journal by account. Each balance sheet account carries forward a balance from the previous month which was reflected in the previous month's balance sheet. The operating account balances are reflected in the monthly operating statement and are closed out each month (no balance carried forward) with their resulting impact reflected directly in the equity account. See Exhibit 5-3 for an example of a simplified ledger.

Financial reports. The result of any good financial accounting system is a set of financial reports which include a balance sheet and an operating statement. The balance sheet (see Exhibit 5-4) is very much like a photograph of the financial condition of the facility at the end of any given month or accounting period. It simply reflects the total assets of the facility, its liability and equity.

The operating statement (see Exhibit 5-5) is more like a motion picture of the facility for some specific time period (usually one month). In it, the revenues for the period are compared with the expenses to demonstrate the solvency (or lack of) of the operation during that period.

EXHIBIT 5-1

Sample Chart of Accounts for a Rehabilitation Facility with a Fund and Functional Accounting System

Structure of Account Coding Assigned to all Revenue and Expense Transactions

XX.XXX.XXX

Fund Codes		Function Codes	Object Codes
00-09	Current Unrestricted Fund	000-099 Production	000-099 Salaries & Wages Expense
10-19	Current Restricted Fund	100-199 Vocational Evaluation	100-199 Fringe Benefits Expense
20-29	Land, Building, & Equipment Unexpended Fund	200-299 Work Adjustment	200-299 Staff Travel Expense
30-39	Land, Building, & Equipment Equity	300-399 Work Activities	300-399 Commodities Expense
40-49	Endowment Fund	400-499 Sheltered Employment	400-499 Contractual Services Expense
50-59	Fund Functioning as an Endowment	500-599 Job Placement	500-599 Stipends and Subsidy Expense
60-69	Custodian Fund	600-699 Residential	600-699 Service Fee Revenue
		700-799 Transportation	700-799 Grant Revenue
		800-899 Occupancy	800-899 Production Sales Revenues
		900-999 Administrative	900-999 Gifts & Subsidy Revenues

EXHIBIT 5-2

Sample Transactions and General Journal Entries for Hope Rehabilitation Facility - First Month of Operation (Simplified)

Transactions for the Period

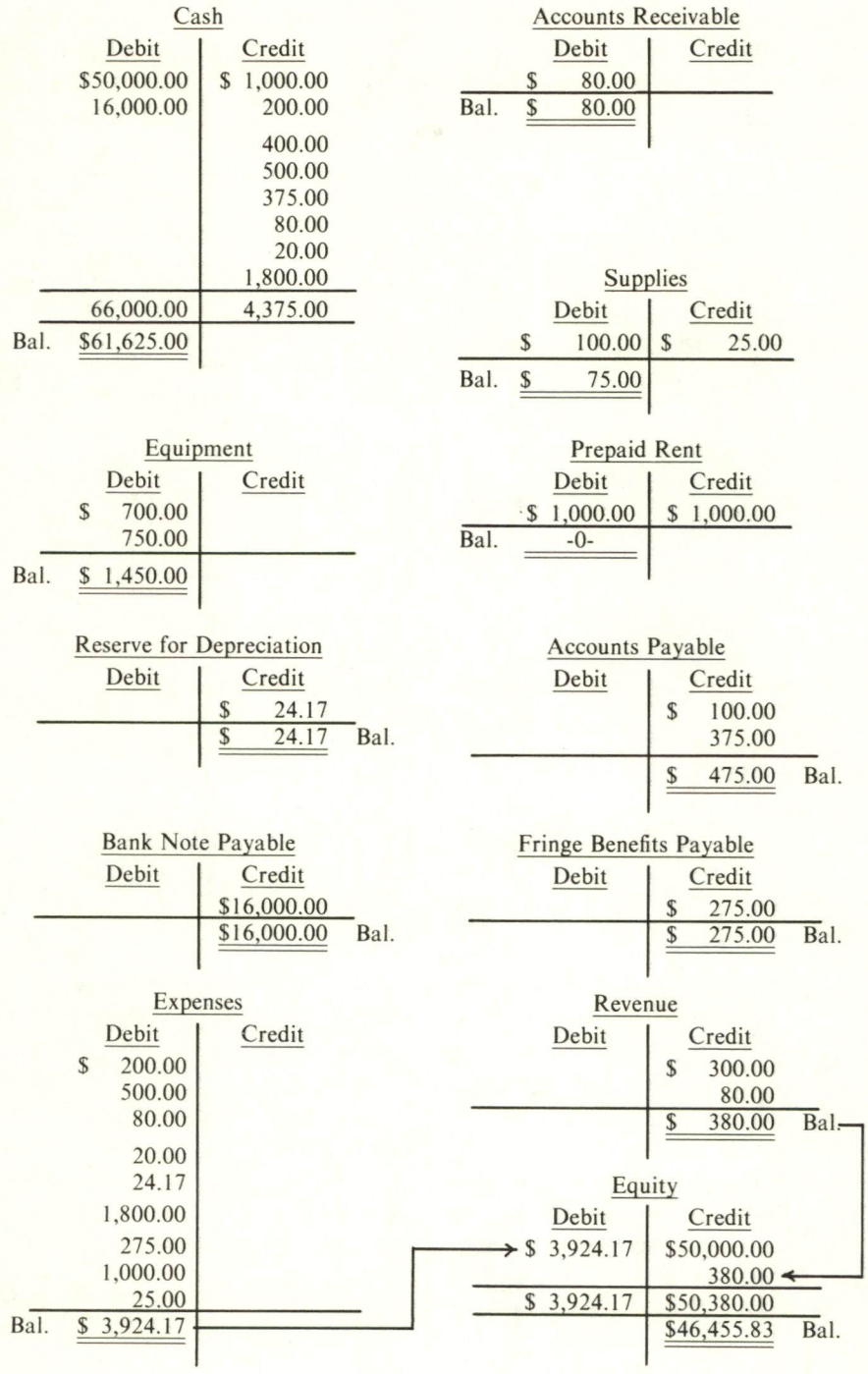
1. Record start up investment for facility from ARC of $50,000;
2. Pay rent of $1,000.00;
3. Pay telephone installation cost of $200.00;
4. Purchase desk and file cabinet at a special rate from interested parent (Market value $700.00; cost to facility $400.00);
5. Purchase office supplies of $100.00 on account;
6. Pay utilities of $500.00;
7. Purchase electric typewriter at $750.00 (½ down and net due 30 days);
8. Reimburse mileage expense for 400 miles for the CEO at $.20/mile;
9. Pay $20.00 postage;
10. Depreciate equipment (5 year life, straight line to zero value);
11. Pay CEO's salary $1800.00 and fringe benefits $275.00;
12. Expense rent for the period;
13. Borrow $16,000 from bank to finance start-up operations for the coming months;
14. Used up $25.00 worth of supplies during the month; and
15. Bill for authorized reimbursement for CEO travel to DVR for State Advisory Committee Meeting $80.00

Related Journal Entries

Entry	Account	Debit	Credit
1.	Cash	$50,000.00	
	Fund Balance (Equity)		$50,000.00
2.	Prepaid Rent	1,000.00	
	Cash		1,000.00
3.	Expense	200.00	
	Cash		200.00
4.	Equipment	700.00	
	Cash		400.00
	Revenue		300.00
5.	Supplies	100.00	
	Accounts Payable		100.00
6.	Expense	500.00	
	Cash		500.00
7.	Equipment	750.00	
	Cash		375.00
	Accounts Payable		375.00
8.	Expense	80.00	
	Cash		80.00
9.	Expense	20.00	
	Cash		20.00
10.	Expense	24.17	
	Reserve for Depreciation		24.17
11.	Expense - Salaries	1,800.00	
	Expense - Fringe Benefits	275.00	
	Cash		1,800.00
	Fringe Benefits Payable		275.00
12	Expense	1,000.00	
	Prepaid Rent		1,000.00
13.	Cash	16,000.00	
	Bank Note Payable		16,000.00
14.	Expense	25.00	
	Supplies		25.00
15.	Accounts Receivable	80.00	
	Revenue		80.00

EXHIBIT 5-3

Sample General Ledger for Hope Rehabilitation Facility-First Month of Operation (Simplified)



Cash

Debit	Credit
$50,000.00	$ 1,000.00
16,000.00	200.00
	400.00
	500.00
	375.00
	80.00
	20.00
	1,800.00
66,000.00	4,375.00
Bal. $61,625.00	

Accounts Receivable

Debit	Credit
$ 80.00	
Bal. $ 80.00	

Supplies

Debit	Credit
$ 100.00	$ 25.00
Bal. $ 75.00	

Equipment

Debit	Credit
$ 700.00	
750.00	
Bal. $ 1,450.00	

Prepaid Rent

Debit	Credit
$ 1,000.00	$ 1,000.00
Bal. -0-	

Reserve for Depreciation

Debit	Credit
	$ 24.17
	$ 24.17 Bal.

Accounts Payable

Debit	Credit
	$ 100.00
	375.00
	$ 475.00 Bal.

Bank Note Payable

Debit	Credit
	$16,000.00
	$16,000.00 Bal.

Fringe Benefits Payable

Debit	Credit
	$ 275.00
	$ 275.00 Bal.

Expenses

Debit	Credit
$ 200.00	
500.00	
80.00	
20.00	
24.17	
1,800.00	
275.00	
1,000.00	
25.00	
Bal. $ 3,924.17	

Revenue

Debit	Credit
	$ 300.00
	80.00
	$ 380.00 Bal.

Equity

Debit	Credit
$ 3,924.17	$50,000.00
	380.00
$ 3,924.17	$50,380.00
	$46,455.83 Bal.

EXHIBIT 5-4
Sample Balance Sheet for Hope Rehabilitation Facility-First Month Operation (Simplified)

Hope Rehabilitation Facility
Balance Sheet
as of
January 31, 1981

Assets		
Cash		$61,625.00
Accounts Receivable		80.00
Supplies		75.00
Equipment (cost)	$1,450.00	
Less Reserve for Depreciation	24.17	
Equipment (remaining undepreciated cost)		1,425.83
Total Assets		$63,205.83
Liabilities & Equity		
Fringe Benefits Payable		275.00
Accounts Payable		475.00
Bank Note Payable		16,000.00
Total Liabilities		$16,750.00
Equity		$46,455.83
Total Liabilities & Equity		$63,205.83

EXHIBIT 5-5
Sample Operating Statement for Hope Rehabilitation Facility - First Month Operation (Simplified)

Hope Rehabilitation Facility
Operating Statement
for the month of
January, 1981

Revenue		
Donation	$300.00	
Reimbursement	80.00	
Total Revenue		$ 380.00
Expenses		
Telephone Installation	$200.00	
Utilities	500.00	
Executive Travel	80.00	
Postage	20.00	
Depreciation	24.17	
Salaries	1,800.00	
Fringe Benefits	275.00	
Rent	1,000.00	
Supplies	25.00	
Total Expenses		$3,924.17
Net Operating Loss		($3,544.17)

Cost or Managerial Accounting

Cost accounting is a service for management which establishes cost control or responsibility centers within the facility, and records revenues and expenses according to these centers. Such accounting can be classified according to the nature of the work into two major types: process and job. Process cost accounting involves collecting costs and revenues for those activities in which it is impossible or impractical to develop costs and revenues for a specific unit of production or service (Moore, 1970). In the for-profit sector, a good example of process cost accounting would be an oil transportation business where it would be impossible to keep track of the cost of revenue associated with hauling any given gallon of oil. However, it is possible to determine the cost of transporting the oil in a period and revenue produced upon selling at it's destination. It is further possible to divide gallons carried into the total expenses for transportation for the period to establish an average cost per gallon, and divide the revenue from sales by the gallons sold to establish the average gross income per gallon. The net income per average gallon is obtained by subtracting the average cost per gallon from the average gross income per gallon.

In a rehabilitation facility, an equivalent example would be the operation of a work adjustment program. In this instance, it is theoretically possible to determine the actual cost of any given client in the work adjustment program, although impractical in the sense that it would cost more to keep such cost records than it would likely be worth. In this case, it is relatively straightforward to determine the cost associated with the work adjustment program and divide that cost by the actual number of client days of service provided during the period. Moreover, there is little reason to believe that the cost of any given day of service for a particular client would be of value to management beyond the average cost of operating the program in general.

The second type of cost accounting is job order procurred from outside the facility. It relates to collecting costs specific to that job order. This type of cost accounting is best accomplished when the nature of the work lends itself to collecting cost and revenue by a specific job order. An example from the private sector would be the development of the space shuttle. In this case only one is being developed; establishment of costs to that project should be quite straightforward. In a rehabilitation facility, the development of a specific contract/project with a specific industry lends itself to this kind of specific cost and revenue assignment, even when more than one industry is involved. Most of the cost accounting in rehabilitation facilities will most likely be process costing and thus will receive the majority of our attention from this point forward.

Direct verses absorption costing. Another way to classify cost accounting is by the nature of the costs included,

that is, direct verses absorption. Direct cost accounting is the process of applying to products or services only those costs directly associated with the production of the good or service. Direct costing involves assigning to cost only those items directly observable as contributing to the cost. In the truest sense, this is responsibility accounting; it attributes to cost only those components directly under the control of the supervisor.

The second major method of cost accounting is absorption or full cost accounting. In almost any enterprise, there are any number of activities, and therefore costs necessary to produce a good or service but for which it would be impossible (or at least impractical) to separate the cost specifically to that process or job order. These costs could best be described as support costs, overhead, or burden. They are basic costs associated with the operation of any given facility that are necessary for the production of any good or service derived from that operation. Some examples would include occupancy costs such as rent, heat, maintenance, janitorial, utilities, and administrative costs such as executive director, payroll, accounting, public relations. Since it is not possible to directly observe the relation of these specific costs to the actual production of a good or service, it becomes necessary to distribute that cost on the basis of some pre-determined formulae which best reflect how the costs are most likely distributed. For example, in the case of occupancy costs, this might involve the use of square feet occupied as the basis for cost distribution. In the case of administrative costs, burden might be distributed on the basis of percentage of budget used by that portion of the operation. In both instances, the formulae reflect some reasonable basis for distributing cost but are not based on direct observation of a connection between the cost and the good or service produced. Absorption costing has an appeal to management in that it includes all costs and provides for maximum control. On the other hand it provides data which are to some extent arbitrary and under no individual's control other than the CEO. Because absorption costing costs more to produce and usually takes longer to generate reports, it may be to a facility's advantage to use direct costing. Direct costing may then use some form of standard or agreed upon percentage of profit to cover the overhead which must be generated to accomplish management purposes, that is, keep costs and revenues at the budgeted level (Evans, 1964).

Joint costs. Another difficulty associated with cost accounting is the problem of joint costs—costs which are direct in nature but associated with the production of more than one good or service. If one were to limit their review of this problem to rehabilitation facilities, it would be quite possible to come away with the sense that it was a problem unique to the rehabilitation facility industry. In reality the joint cost problem is common to most industries. A good example from outside of rehabilitation would be an oil refinery which produces multiple products such as gasoline, diesel fuel, oil (lubricant), parafin, and the raw materials to produce several plastics. All of these products are produced through the same basic process. Therefore, costs related to the separate products can be viewed as joint costs. In a rehabilitation facility, the production of contracts and sheltered employment for severely handicapped persons, in the same space and using the same work resources, produce a similar joint cost problem. To the extent that the separation of these costs is being used for internal management purposes (improved controls and cost reductions), the problem is solved via negotiation among the parties involved. In other words, all parties agree on some relatively meaningful but clearly arbitrary formalae. As soon as the use of this cost accounting study is expanded beyond internal use and used to determine fees or other charges, the problem becomes more serious because the splitting of the costs is expensive and time consuming. If the results are not accepted by all parties, the utility of the process must be seriously questioned. As soon as splitting joint costs must serve some external purpose, issues of efficient and effective use of accounting time must be raised. The results of joint cost studies cannot be defended in a meaningful fashion unless there are standards previously agreed upon by all parties interested in that cost in advance. Cost accounting can only be helpful in identifying costs which are joint, and suggest efficient and effective formulae for splitting these costs. It falls to management to negotiate the standards to be used with the agency which sets the fees (Houston, 1972).

Cost accounting involves the collection of direct expenses and revenues associated with a process or job order. Depending upon the purposes, it may involve the distribution of joint and support costs to the job or process. The primary value of these data is to provide management with information and, possibly, controls to improve operations. See Exhibits 5-6 and 5-7 for examples of cost accounting studies with and without support costs.

EXHIBIT 5-6
Sample Direct Cost Accounting Study of the Vocational Evaluation Function at Hope Rehabilitation Facility

A. Summary of Direct Vocational Evaluation Costs for the Previous 12 months

Salaries	$15,000
Fringe Benefits	2,250
Staff Travel	450
Commodities	1,150
Contractual Services	2,439
Depreciation	358
	$21,647

B. Client Days in Vocational Evaluation for the Previous 12 months = 1,200.

C. Direct Cost per Client Day in Vocational Evaluation

$$\frac{\$\ 21,647}{1,200} = \$18.04$$

EXHIBIT 5-7
Sample Full (Absorption) Cost Accounting Study of the Vocational Evaluation Function at Hope Rehabilitation Facility

A. Summary of Indirect or Overhead Costs for Previous 12 months (Hope has only two such functions).

Administrative		Occupancy	
Salaries	$29,000	Salaries	$12,000
Fringe Benefits	4,350	Fringe Benefits	1,800
Staff Travel	1,004	Staff Travel	58
Commodities	3,300	Commodities	6,700
Contractual Services	5,058	Contractual Services	17,000
Depreciation	215	Depreciation	568
	$42,927		$38,126

B. Allocation of Indirect or Overhead Costs to Vocational Evaluation.

1. Administrative costs are allocated on the basis of percentage of the direct cost experience used by the function. (Vocational evaluation at Hope used 12.4% of the direct cost experienced in the previous 12 months).

   Therefore the administrative costs allocated to the vocational evaluation function for the period = $42,927 × .124 = $5,322.95.

2. Occupancy costs are allocated on the basis of the percentage of square footage occupied by the function. (Vocational evaluation at Hope used 13.3% of the total square footage available in the facility for the period).

   Therefore the occupancy cost allocated to the vocational evaluation function for the period = $38,126 × .133 = $5,070.76.

C. Full Cost Calculation

Direct Cost (from Exhibit 5-6)	$21,647.00
Allocation of Administrative Cost	5,322.95
Allocation of Occupancy Cost	5,070.76
Full Cost	$32,040.71

D. Full Cost per Client Day in Vocational Evaluation

$$\frac{\$\ 32,040.71}{1,200} = \$26.70$$

Example

NOVA Industries has for some time battled the stigma of a not-for-profit industry in relation to any excess of revenue over expenses. This stigma was, for the most part, self imposed. The prior philosophy of the board of directors and previous facility administrators was one of reluctance to show profit for fear of legal and funding source retaliation. This legally unfounded posture resulted in a atmosphere of little growth and poor planning for the future. The present administration is becoming enlightened in its views of resource management and revenue utilization. The folly of the past is becoming quite evident through the use of financial analysis techniques (see Chapter 6). A compatible effort by the CEO and board is evolving into revenue planning and use. The facility administration had to be reminded that their not-for-profit corporate status did allow excess revenue to be used for payment to the board. The chief executive officer, in consultation with the board, had set a goal of having enough reserves available above current liabilities in the form of quick assets (current assets less inventories and prepayments), to support the organization for two quarters during economically slow periods.

When the current CEO came on board, the facility utilized a cash accounting system. The previous administration did not attend to the implications of materiality, full disclosure, and the catastrophic potential for decisions based on less than adequate financial information. The organization's responsibility to its public owners (the community) was a partial motivator in changing to an accrual system of accounting. This allowed the facility to portray its fiscal status in a manner that reflected a true, meaningful, and current image. The other motivating factors came from a desire to be able to identify costs with related revenues and, thereby, assess profitability for the period. Exhibit 5-8 is the general journal and Exhibit 5-9 is the general ledger for a simplified month for NOVA Industries. Exhibits 5-10 and 5-11 are the accrual financial reports which resulted from these journal and ledger entries.

The finance committee of the board and the CEO decided to prepare a chart of accounts that could be upgraded as needed by increased information needs. This chart, which includes all the balance sheet accounts (assets = liabilities + equity), the operating accounts (revenues and expenses), and a list of funds was prepared on one sheet to facilitate access and synthesis. Exhibit 5-12 represents NOVA's classification document for the transactions of the facility.

The facility has been discussing the idea of negotiating its fee for service structure with DVR but, up to this time, has not been armed with adequate information. NOVA was cited in its last accreditation survey for not having adequate cost identificaiton. Its fees have been based on a total cost for all client services divided by number of clients served divided by 52 to get a weekly figure. The facility figured this out and the state agency told them what fee would be paid regardless of their computation. Since the facility was really not involved in the fee computation by the state agency, and the facility's actual services were unrelated to what the state agency was paying, the end result was quite predictable, that is, a loss. Previous negotiation had always been fruitless due to a lack of data from the facility to support claims for individual service fees such as in vocational evaluation and work adjustment for VR clients.

EXHIBIT 5-8
Sample—General JOURNAL—Nova Industries

DATE	ACCOUNT	DEBIT	CREDIT
July 1	Cash	$16,000.00	
	Investment		$16,000.00
	Agency gave workshop cash		
July 1	Pre-Paid Rent	600.00	
	Cash		600.00
	Paid 1st and last months rent		
July 2	Equipment	6,000.00	
	Cash		2,000.00
	Accounts Payable		4,000.00
	Purchased equipment partially on account		
July 3	Supplies	800.00	
	Cash		800.00
	Supplies for clerical area		
July 3	Inventory	26,000.00	
	Accounts Payable		26,000.00
	Purchased workshop materials		
July 3	Cash	20,000.00	
	Bank Note Payable		20,000.00
	Borrowed money from bank		
July 15	Cash	4,600.00	
	Revenue		4,600.00
	Goods sold by clients		
July 15	Operations Expense	3,900.00	
	Inventory		3,900.00
	Cost of sale by clients		
July 17	Accounts Payable	4,000.00	
	Cash		4,000.00
	Paid on equipment		
July 18	Cash	2,000.00	
	Accounts Receivable	3,600.00	
	Revenue		5,600.00
	Sale of goods—term ½ balance in 10 days remainder in 30		
July 18	Operations Expense	4,800.00	
	Inventory		4,800.00
	Cost of goods sold		
July 21	Accounts Payable	$26,000.00	
	Cash		$26,000.00
	Paid for materials purchased		
July 26	Operations Expense	230.00	
	Cash		230.00
	Paid Miscellaneous Expense		
July 28	Operations Expense	54.00	
	Cash		54.00
	Paid utility bill		
July 29	Cash	1,800.00	
	Accounts Receivable		1,800.00
	Payment on goods purchased		
July 29	Supplies	360.00	
	Accounts Payable		360.00
	Bought supplies on account		
July 31	Cash	6,200.00	
	Revenue		6,200.00
	Goods sold by clients		
July 31	Operations Expense	5,300.00	
	Inventory		5,300.00
	Cost to shop of goods sold		
July 31	Operations Expense	2,400.00	
	Cash		2,400.00
	Paid monthly salaries		
July 31	Operations Expense	436.00	
	Supplies		436.00
	Supplies used during month		
July 31	Operations Expense	200.00	
	Equipment		200.00
	Depreciation on equipment		
July 31	Operations Expense	300.00	
	Pre-Paid Rent		300.00
	Expired rent for 1st month		

EXHIBIT 5-9
Sample Ledger—NOVA Industries

Cash

Bal.	-0-	
	16,000.00	600.00
	20,000.00	2,000.00
	4,600.00	800.00
	2,000.00	4,000.00
	1,800.00	26,000.00
	6,200.00	230.00
		54.00
		2,400.00
	$50,600.00	$36,084.00
Bal.	$14,516.00	

Pre-paid Rent

Bal	-0-	
	600.00	300.00
	600.00	300.00
Bal.	$ 300.00	

Supplies

Bal.	-0-	
	800.00	436.00
	360.00	
	$ 1,160.00	$ 436.00
Bal.	$ 724.00	

Accounts Receivable

Bal.	-0-	
	3,600.00	1,800.00
	$ 3,600.00	$ 1,800.00
Bal.	$ 1,800.00	

Equipment

Bal.	-0-	
	6,000.00	200.00
	$ 6,000	$ 200.00
Bal.	$ 5,800	

Inventory

Bal.	-0-	
	$26,000.00	$ 3,900.00
		4,800.00
		5,300.00
	$26,000.00	$14,000.00
Bal.	$12,000.00	

Expenses

$ 3,900.00	
4,800.00	
230.00	
54.00	
5,300.00	
2,400.00	
436.00	
200.00	
300.00	
$17,620.00	
$17,620.00	-0-

Bank Note Payable

	-0-	Bal.
	$20,000.00	
-0-	20,000.00	
	$20,000.00	Bal.

Accounts Payable

	-0-	Bal.
$ 4,000.00	$ 4,000.00	
26,000.00	26,000.00	
	360.00	
$30,000.00	$30,000.00	
	$ 360.00	Bal.

Investments

	-0-	Bal.
$17,620.00	$16,000.00	
	16,400.00	
$17,620.00	32,400.00	
	$14,780.00	Bal.

Revenue

	$ 4,600.00
	5,600.00
	6,200.00
-0-	16,400.00
	$16,400.00 Bal.

EXHIBIT 5-10
Sample Balance Sheet—NOVA Industries

NOVA Industries
Balance Sheet
as of July 31, 19xx

ASSETS		
Current Assets		
Cash		$14,516.00
Accounts Receivable		1,800.00
Supplies		724.00
Inventory		12,000.00
Prepaid Rent		300.00
Fixed Assets		
Equipment (acquisition value)	$6,000.00	
less Reserve for Depreciation	200.00	
Equipment (current value)		5,800.00
Total Assets		$35,140.00
LIABILITIES & EQUITY		
Current Liabilities		
Accounts Payable		$ 360.00
Long-term Liabilities		
Bank Note Payable		20,000.00
Total Liabilities		$20,360.00
Equity		14,780.00
Total Liabilities & Equity		$35,140.00

EXHIBIT 5-11

Sample Operating Statement—NOVA Industries

NOVA Industries
Operating Statement
for the Month of July, 19xx

REVENUE	
Finished Goods Sales	$16,400.00
Total Revenue	$16,400.00
EXPENSES	
Cost of Goods Sold	$14,000.00
Utility Bill	54.00
Miscellaneous	230.00
Salaries	2,400.00
Supplies	436.00
Depreciation	200.00
Rent	300.00
Total Expenses	$17,620.00
Net Operating Loss	$(1,220.00)

An assertive approach to show cost related to service fees was decided upon using vocational evaluation as the test case. In order to break down the cost in the most descriptive form possible, it was necessary to determine three basic costs within this responsibility center.

1. Direct vocational evaluation cost—salaries, equipment depreciation, supplies;
2. Overhead costs to include occupancy (rent, utilities, maintenance, janitorial) and administration (executive, accounting, public relations); and,
3. Joint costs—the cost of providing one week situational assessment for vocational evaluation clients on the production floor of the workshop.

These were considered the areas necessary to produce the service. An immediate problem was encountered with the accounting system that was evolving at the time. The shift from a cash method to accrual accounting was taking place, and the ability to break out these costs was not available from years past. NOVA, in consultation with DVR, decided to collect the information for six months into this fiscal year and then meet with DVR to discuss the relationship between the actual fee paid and the costs thus accumulated. It was agreed that a new fee might then be negotiated.

For purposes of fee calculation, DVR agreed to the following bases for overhead cost distribution: occupancy costs based on actual total costs distributed on the basis of actual square feet occupied, and administrative costs based on the total actual costs distributed on the basis of percentage of actual direct expense for the vocational evaluation budget.

The joint cost area was much more difficult to determine. After much debate and study, it was decided that the rehabilitation cost for the production area would be based on an arbitrary formula. The overall productivity of the clients in this area was 50 percent of competitive and, therefore, required twice the indirect costs associated with a competitive industry. DVR agreed to pay one-half the cost of the indirect production cost divided by the total

number of client days of service provided in the production area to determine the actual cost per client day.

$$.5(I) \div D = C$$

Where

I = indirect production costs
D = total client days
C = cost per client day

This cost would then be multiplied by the number of days clients in vocational evaluation spent in the production area.

$$C \times N = T$$

Where

C = cost per client day
N = days clients in production area
T = total daily cost

NOVA also tried to negotiate a special spoilage fee for clients in vocational evaluation as well as a special allotment for observation in evaluation. DVR did not agree to these amounts for that year but NOVA decided to begin collecting approximate information for the following year's negotation.

The results of the six month study provided the data in Exhibit 5-13.

EXHIBIT 5-12
Chart of Accounts - NOVA Industries

FUNDS

Current General Fund (unrestricted)	Current Restricted Fund (Grant)	Land, Building & Equipment Equity

BALANCE SHEET

Current Assets
- Cash
- Accounts receivable
- Marketable securities
- Inventory
- Prepaid rent
- Prepaid insurance
- _____
- _____
- _____

Fixed Assets
- Equipment
- Furniture
- Trucks
- Leasehold improvements
- Cars
- _____
- _____
- _____

Liabilities
- Accounts payable
- Payroll taxes payable
- Accrued payroll
- Notes payable
- _____
- _____
- _____

Fund Balance

Fund Balance
- _____
- _____
- _____

OPERATING STATEMENT

Function	Object
Administration	Expense
Work Adjustment	Salaries
	Fringe benefits
Vocational Evaluation	Payroll taxes
	Client wages
Production	Client payroll taxes
Work Activity	Contract services
	Inservice training
Residential	Telephone
	Insurance
Recreation	Professional membership
	Repairs and maintenance
Transportation	Supplies-general stores
Occupancy	Utilities
	Recreation
_____	Miscellaneous
	Staff recruitment
	Rent
_____	Community education
	Small tools
_____	Printing
	Postage
_____	Accounting
	Accreditation
_____	Consultants
	Automobile expense
_____	Educational materials
	Advertising
_____	Depreciation
	Raw materials
_____	
_____	Revenue
	Interest
_____	V.R. Tuition
	Sub contract
	Prime Manufacturing
	Contributions
	Title XX
	Social Security
	County mill levy
	Revenue sharing
	United Way

EXHIBIT 5-13

Full Cost Accounting Study of Vocational Evaluation Function at NOVA Industries for the Previous Six Months

A. Summary of Direct Vocational Evaluation Costs for the Previous 6 months.

Salaries	$ 7,800
Fringe Benefits	1,170
Staff Travel	150
Commodities	630
Contractual Service	1,300
Depreciation	193
	$11,243

B. Summary of Support Costs for Previous 6 months.

Administrative		Occupancy	
Salaries	$15,250	Salaries	$ 7,000
Fringe Benefits	2,288	Fringe Benefits	1,050
Staff Travel	490	Staff Travel	23
Commodities	1,600	Commodities	3,300
Contractual Services	2,480	Contractual Services	9,000
Depreciation	150	Depreciation	315
	$22,258		$20,688

C. Summary of Joint Costs for Previous 6 months.

	Production
Salaries	$25,000
Fringe Benefits	3,000
Staff Travel	758
Commodities	8,903
Contractual Services	2,500
Depreciation	1,056
	$41,217

D. Allocation of Support Costs.

1. Administrative Costs allocated on the percentage of direct costs, i.e., Vocational Evaluation = 11.6%, & Production = 42%.
   a. Vocational Evaluation = $22,258 × .116 = $2,581.93
   b. Production = $20,688 × .42 = $8,688.96
2. Occupancy Costs allocated on the percentage of actual square footage occupied, i.e. Vocational Evaluation = 12%, & Production = 45%.
   a. Vocational Evaluation = $22,258 × .12 = $2,670.96
   b. Production = $20,688 × .45 = $9,309.60

E. Client days in Vocational Evaluation for the Previous 6 months.

Total client days Vocational Evaluation = 600
Client days in Production for Vocational Evaluation = 150
Total client days in Production = 6,000

F. Joint Cost Calculation.

1. Allowed Costs
   a. 150/6000 = .025 × ½ = .0125 (½ of percentage of days in production used by Vocational Evaluation)
   b. Allocated Administrative Cost to Production $ 8,688.96
      plus allocated Occupancy Cost to Production 9,309.60
      Total Support Cost allocation to Production $17,998.56
   c. Allocation of joint Production costs to Vocational Evaluation $17,998.56 × .0125 = $224.98

G. Total Cost Computation.

Direct	$11,243.00
Support	5,252.89
Joint	224.98
Total	$16,720.87

H. Client days in Vocational Evaluation = 600

I. Total allowable cost per client day in Vocational Evaluation

$16,720.87 / 600 = $27.87 per client day

J. Additional Costs (not allowable)

1. Estimated client spoilage in Production = $5,600.00
2. Percentage of clients from Vocational Evaluation in Production = 3.75%
3. Spoilage attributable to Vocational Evaluation clients = $210.00
4. Spoilage cost per day due to Vocational Evaluation clients = $.35
5. Estimate of full cost = $28.22

K. Fee negotiation.

1. DVR currently pays $25.00/day for clients in Vocational Evaluation
2. Based on their allowable costs, NOVA is losing $2.87/client/day for each client served in Vocational Evaluation
3. The spoilage cost per client day for Vocational Evaluation, i.e., $.35, does not seem to be material, particularly in comparison to the cost of collecting the data.
4. Therefore NOVA decided to negotiate for a per day fee per client in Vocational Evaluation of $27.90
5. Upon reviewing the data, DVR agreed to increase their approved per day fee to NOVA for clients in Vocational Evaluation to $27.00

Exercises

1. Explain the similarities and differences in for-profit and not-for-profit entities.

2. What are the benefits of fund accounting? Provide an example.

3. Define entity.

4. What is the major distinction between cash and accrual accounting? Explain.

5. Explain the relationship of double entry bookkeeping and the basic accounting equation A = L + E.

6. Given the following transitions, explain their impact on the appropriate balance sheet or operating accounts.

   A. Purchased $9,600.00 for inventory on account.

   B. Purchased a $600.00 desk with cash.

   C. Jerry Lorenz paid the $1,000.00 he has owed us for 18 months.

   D. Cost of goods sold for contract "D" was $3,600.00.

7. Explain the phenomenon of "prepayments" in accrual accounting.

8. What function does a journal have on the accrual accounting system?

9. What function does a ledger have in an accrual accounting system?

10. Explain the difference in process and job cost accounting.

11. Explain the following terms:

    A. Direct cost accounting.

    B. Absorption cost accounting.

    C. Joint cost.

Answers to Exercises

1. DIFFERENCES		SIMILARITIES
PROFIT	NON-PROFIT	
- Produce a profit	- Accomplish a sanctioned social purpose	- Operates on a financial base
- Can provide its owners with a portion of the profit	- Must reinvest all profits into the entity	- Both can and should at times produce a revenue in excess of expenses
- Fund accounting not used	- Fund accounting accepted	
	- May have restricted assets	
	- May receive donations	(See pages 65-66)

2. A fund is a sum of money which constitutes an independent accounting entity, established and maintained for a specific purpose. Fund accounting simply groups certain assets, and related liabilities and equity into funds which have similar purposes and degrees of restrictions. Due to the present restrictions on certain obtained assets (grants, donations, restricted gifts, etc.) to include these with the general operating assets would give a false impression as to the useability of these monies. This separation produces a financial report which more accurately reflects reality for the organization. Example: NOVA Industries has a building fund raised from public donations to acquire land and buildings. The board of directors stated in written policy that this principle and accrued interest can only be used to purchase land or buildings for the facility. On the income statements this restricted building fund is reflected separately to avoid giving the false impression that monies could be used to pay for current operations.

   (See page 65)

3. An entity is, from an accounting point of view, that basic enterprise about which we are trying to report. It has some form of legal existance. It is capable of engaging in a variety of legal and business transactions. Examples would include propriaterships, partnerships, not-for-profit corporations, a legal division of government.

   (See page 66)

4. The major distinction between cash and accrual accounting is the timing of reporting expenses and revenues. In a cash system, revenues are recorded when they are received, expenses when they are paid. This can lead to material distortions in the actual financial condition of the facility. Decisions made on this information may not be in the best interest of the facility.

   Accrual accounting corrects this situation by recording the expenses when they become owed by the facility and recording revenues when they become owed to the facility. This accurately reflects the true financial condition of the entity and shows expenses in closer proximity to the revenues they produced.

   (See page 66)

5. Double entry bookkeeping is tied to the basic accounting equation, assets equals liabilities plus equity (A = L + E). The double entry system simply reflects the need to keep this equation in balance at all times, that is, for every entry made, there must be a corresponding entry which keeps the equation in balance. The system developed uses debits (left side entries) and credits (right side entries). The effect of debits and credits to assets, liabilities and equity can best be shown using this simple table.

	debits	credits
assets	increase	decrease
liabilities & equity	decrease	increase

   (See pages 66-67)

6. A. Debit to inventories (increase an asset account) and credit accounts payable (increase a liability account).

   B. Credit to cash (decrease an asset account) and debit to furniture (equipment) (increase a fixed asset account)

   C. Debit cash (increase an asset account) and credit accounts receivable (decrease an asset account).

   D. Credit finished goods inventory (decrease an asset account) and debit expense (decrease an equity account).

   (See page 67)

7. Certain types of expenses must be prepaid by the facility such as rent and insurance. To obtain the desired service or use, the facility must pay the entire amount due or premium for several months or years in advance. If the entire amount were shown as an expense, it would distort the expenses for the period. The transaction is therefore viewed as the purchasing of an asset and the expense is spread over the life of the service or use. The initial transaction debits a prepaid account (rent or insurance) and credits accounts payable for the entire amount. Each subsequent monthly assessment is handled by debiting expense and crediting the prepaid account. Thus the expense is reflected in the period in which it occured.

   (See pages 67-68)

8. Records transactions in a chronological sequence. Each entry is a double entry. It is record of the actual transaction, how classified and provides a basis for the correct entry to the ledger. A short description of the transaction may also be included.

   (See pages 69-70)

9. The ledger is a record of all accounts of the facility and reflects the entries posted from the journal. The balance in the account can always be obtained by footing and posting the ledger.

   (See pages 70-71)

10. Process cost accounting involves collecting costs and revenues for those activities in which it is impossible or impractical to collect costs and revenues for a specific unit of production or service, for example, cost associated with work adjustment. Maintenance of process cost records is usually less expensive than job order cost accounting.

    Job order accounting is best accomplished when the nature of the work lends itself to collecting specific costs and revenues by job or task. This can best be seen in a facility which has fairly large and enduring subcontracts.

    (See page 72)

11. A. Direct cost accounting is the process of applying directly to products or services only those costs directly related to the actual cost of production. It involves assigning cost to only those items directly observed as contributing to those costs.

    B. Absorption or full cost accounting is the computation of direct costs plus overhead or burden costs. These overhead costs are legitimate costs of the operation but it is not possible or practical to directly observe the relationship of a specific cost to the actual product or service. It is necessary to distribute these costs on the basis of a predetermined formula which best reflects how these costs are likely to be distributed.

    C. Joint costs are direct in nature but associated with the production of more than one good or service.

    (See pages 72-73)

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Financial Analysis

Financial analysis deals with the study and interpretation of the financial reports produced by accounting (Bittel, 1978). When it comes to financial analysis, there is no set of predetermined calculations which can be performed on any entity's financial statements which will automatically provide all, or even a major portion, of the answers concerning the entity's financial condition, and what to do about it. For financial analysis to be meaningful, it must begin with a designation of what questions are to be answered, who wants to know, and for what purpose. Asking the right questions is essential to developing the appropriate analytical techniques. For example, will this facility be able to pay its bills on a timely basis for the immediate future (12 months); will this facility be able to increase its fund balance during this period; how close is the actual financial performance to the financial plan; and, to the extent there is variance, what planning assumptions were faulty and therefore must be adjusted to improve operations? The questioners may be internal or external to the organization, and may be asking the questions to develop a plan to improve the situation or to decide if some external enterprise, such as a bank, benefactor, funding agency, or industrial contractor, wishes to get involved with the facility. The focus of this chapter is on analytic techniques for internal managers who are trying to guide a facility's financial operation in a positive fashion.

Basic Strategies of Financial Analysis

There are two basic and well accepted strategies for doing financial analysis—ratio analysis and comparative analysis (Kellog, 1969). Another strategy of recent attention is the use of regression analysis. This procedure avoids some of the pitfalls associated with the use of ratios (Tummins & Watson, 1975). Since this is a relatively new and has limited acceptance in the field of finance, this chapter is limited to a discussion of the use of ratios and comparative techniques.

Ratio analysis

Ratio analysis is a popular approach involving the comparison of two pieces of financial data to determine the relationship. Ratio analysis is relatively simple and can be done with a pocket calculator. It allows for comparisons between facilities even when quite different in size. The flexibility of the technique is both a strength and a weakness. From the standpoint of calculation, a ratio can be computed on any two pieces of financial data. However, to be meaningful, there should be some reason to believe that the relationship has conceptual significance. For example, there is good reason to believe that the relationship between current assets and current liabilities has significance in determining liquidity. On the other hand, it would be hard to establish any significance in the relationship between freight costs and marketable securities.

Another problem with ratios is interpretation. The ratio, in and of itself, has little meaning. A scale must be developed for comparison with the ratio in order to provide some meaning. There are three ways to develop such a scale: a) use of historical ratios from the same facility; b) use of predetermined standards which reflect a desired ratio relationship; and c) comparison with ratios from other rehabilitation facilities with similar orientations and emphasis (Bernstein, 1978).

Finally, ratios may give the illusion of providing answers when, even though used in a skilled fashion, they can in fact only provide clues and identify symptoms for underlying problems. No single ratio contains enough information to allow for meaningful understanding of the condition/problem and determination of solutions. Such solutions would, by definition, be overly simplistic and could create more problems than solutions. Closely related is the fact that ratios are based on certain assumptions about the facility and its environment. Moreover, the data used in the calculation of the ratios are based on additional assumptions, for example, the basis for evaluation of assets, or evaluation of the liquidity of certain assets. To the extent that those assumptions are faulty, the interpretation of the ratio becomes problematic at best.

Even when the assumptions are accurate, meaningful interpretation of the ratio requires 1) considerable understanding of those underlying assumptions and the ability to generate accurate assumptions about the current environment; and 2) the impact of planned actions on the future environment in order to produce solutions which produce the desired results.

Ratios can be used to assess performance in several areas of financial operations. To understand those assessments, it is necessary to introduce several key concepts. Liquidity is a financial concept which has to do with convertibility of the facility's assets to cash. Stated another way, there must be flexibility to use those assets for a variety of purposes. Assets which are flexible, or convertible to cash, or which can be used for almost any purpose are considered the most liquid. Solvency is the ability of the facility to meet its obligations on a timely basis. Leverage is a reflection of ownership or debt relative to the assets of the facility. Both liquidity and leverage, while requiring judgements and assumptions, can be assessed directly from the financial reports. Solvency, while of crucial concern to the facility administrator, cannot be calculated directly from the financial reports, and can only be indirectly estimated. Activity is a concept related to the timeliness of converting assets to more liquid forms and retiring payables to paid status. Profitability refers to the facility's ability to increase its equity or fund balance. This chapter will explore several ratios used to assess these concepts in a rehabilitation facility.

Comparative analysis

The other common and productive approach to financial analysis is comparative analysis, a method for comparing actual performance with some standard. The most commonly applied standards are budget for that period, budget cumulative, last year at this time performance, and average of previous years' performance. Problems associated with this approach include cost and difficulty of providing the data, complexity of interpretation, and selection of meaningful standards. The use of previous years' data, while appealing, assumes that there should be some similarity in performance between years. This may be inaccurate due to significant changes in the external environment or due to major changes in the facility's plan for the year in question. The use of the budget as a yardstick, while generally considered a better indicator, may also be problematic due to inadequate budget preparation rather than actual performance problems. In any case, this strategy for financial analysis will also be explored in some depth later in the chapter.

Financial Ratios and Calculations

Liquidity

There have been a number of ratios developed to assess liquidity (the relationship of liquid assets—cash and cash-like) to current liabilities (those which will be coming due in the immediate future). Each of these involves making a judgement on anticipated liquidity of assets and comparing those with debts which will come due in a year.

Cash ratio. The most conservative approach is to simply compute the ratio of actual cash on hand to current (due within the year) liabilities.

That is $\$ \div C_L = C_R$

Where

$\$ = Cash$

C_L = Current liabilities

C_R = Cash ratio

This approach has the advantage of requiring almost no judgement in deciding what items to include in the analysis. However, it runs the risk of presenting an unrealistically negative picture of the facility's liquidity. This would be particularly problematic for use in a facility which has a substantial amount of government receivables, since they are slow in being paid, although reliable with respect to the fact that they will be paid at some time.

Quick ratio. The next most conservative approach is the quick ratio, often referred to as the Acid Test. This involves determining what assets are quick, that is, assets which are either currently cash or those which are quickly (on an as needed basis) convertible to cash. Quick assets are generally defined as current assets minus inventories and prepayments, assuming that inventories and prepayments are not quickly convertible to cash. Under the most dire of circumstances in which they would have to be sold immediately, the discount off book value would be quite high. Moreover, cash produced would probably be offset by the heavy discount that would be experienced on the accounts receivable conversion to cash on such a rapid basis. The quick ratio is determined by dividing the quick assets by the current liabilities.

That is $Q \div C_L = R$

Where $Q = C_a - (V+P)$

and Q = Quick assets

C_L = Current liabilities

C_a = Current assets

V = Inventories

P = Prepayments

R = Quick ratio

Conservative financial analysts frequently describe a desirable quick ratio as 1:1. In other words, there should be enough assets that can be quickly converted to cash at will, to pay for the liabilities which will be due and payable within the year.

Current Ratio. The least conservative test of liquidity is the current ratio, obtained by dividing the current (con-

vertible to cash within the year) assets by the current liabilities.

That is, $C_a \div C_L = C$

Where

C_a = Current assets
C_L = Current liabilities
C = Current ratio

Most properly prepared balance sheets include the accountant's assessment of what are current and what are fixed assets. Current assets are generally construed to be cash, marketable securities, accounts receivable, pledges receivable (for the year), inventories (supplies, raw materials, merchandise in transit, work in process, and finished goods), and prepaid expenses. Since these assets are much less readily convertible to cash, and since rapid conversion will likely be under less than optimum circumstances (resulting in heavy discounts to book value), the minimum safe level for a current ratio is generally construed to be 1.5:1. A more desirable ratio is one which affords at least one month operating reserve of current assets over and above the amount necessary to obtain the 1.5:1 ratio. In other words, if the facility had $333,333 in current liabilities, it would need $500,000 in current assets to maintain a minimum safe level of 1.5:1. If it had operating expenses averaging $100,000/month, a desirable amount of current assets would be $600,000 for a current ratio of 1.8:1

($C = C_a \div C_L = \$600{,}000 \div \$333{,}333 = 1.8$).

Liquidity is basically an accounting concept which may or may not be of particular value to a facility executive who is trying to assess the solvency of the facility. To the extent that liquidity is an indirect measure of solvency, it is based on the assumption that liquid assets would be used to pay current liabilities when financial conditions are less than optimal. To the extent this assumption is faulty, liquidity measures may be less than optimal measures of solvency. Beaver (cited in Heath, 1978) found that liquidity measures were generally poor predictors of impending bankruptcy. When averaged over a five year period, all three of the above ratios produced error rates of about 33 percent when predicting bankruptcy for for-profit firms, one half of which survived while the remaining went bankrupt. When proximity of the calculated ratio was considered, the current ratio proved to be the worst predictor for insolvency five years from bankruptcy (45% error rate of prediction). The quick and cash ratios were better predictors, virtually indistinguishable from one another (37% and 38% error rate respectively). At one year from bankruptcy, all of these ratios improved with the current ratio generating a 20 percent error rate, cash ratio a 22 percent error rate, and quick ratio a 24 percent error rate. Thus, while liquidity may be a useful tool for managers to guide day to day operations, it is not particularly robust for determining ultimate solvency. If one tried to predict bankruptcy at five years from this occurrence using one of these ratios, they would be wrong one out of two to one out of three times. Even as close as one year from bankruptcy, they would be wrong one out of four, to one out of five, times.

Leverage

Leverage is related ownership. Since there are only three basic components to the accounting equation, that is, assets (what the facility has) equals liabilities (what is owed) plus equity (what is owned), there are three possible ways to express leverage in ratio form.

Fund Balance Ratio. The first leverage ratio is the fund balance or equity ratio, the fund balance (what is owned) divided by total assets (what the facility has).

That is, $F \div A = B$

Where F = Fund balance
A = Total assets
B = Fund balance or equity ratio

This ratio has a ceiling of +1 meaning it owns all of what it has (no liabilities). If the ratio was zero, it would mean that the facility has no equity/ownership in its assets. If the ratio is negative, it would mean that the facility owes more than it has. The lower limit is theoretically infinity, but the practical reality is that the facility will go bankrupt prior to that ratio going much below zero. The minimum safe level for a facility is considered to be 0.4:1 (the facility owns about 40% of what it has). Given the vagaries of actual discount rates when liquidating assets under less than desirable conditions, this would mean that the facility is just basically solvent. A more desirable situation would be to have the equity necessary to maintain a 0.4:1 ratio plus that necessary to provide at least a one month operating reserve. The other two leverage ratios are really just different angles of the same picture.

Indebtedness Ratio and Debt to Asset Ratio. The indebtedness ratio (liability over equity), and the debt to asset ratio (liabilities/assets) provide virtually the same information from slightly different vantage points.

That is $L \div E = I$ and $L \div A = D$

Where

L = Liabilities
E = Equity
I = Indebtedness ratio
D = Debt to asset ratio
A = Total assets

The equivalent minimum safe level expressed as 0.4:1 for the fund balance ratio would be 1.5:1 for the indebtedness ratio (the lower the ratio the better) and 0.6:1 for the debt to asset ratio. Thus, there is little point in computing more than one such ratio since when one is computed, the other two are automatically known. Selection of the appropriate ratio would seem to be best dictated by what is used by others in the industry to allow maximum comparability among facilities. Goodwill Industries of America routinely uses the fund balance ratio in its reports; thus, this may be the most useful leverage ratio.

If we look at leverage as another indirect measure of solvency, the Beaver study (cited in Heath, 1978) can

also be of some value in determining the value of this as a predictor. When averaged over a five year period just prior to bankruptcy, leverage ratios produced a 27 percent error rate, ranging from 34 percent error rate at three years to 19 percent error rate at one year. Thus, it is fairly clear that leverage ratios are generally better predictors of solvency than liquidity ratios.

Cash flow analysis

Cash flow analysis is a technique which, like cost accounting techniques, can be used both for forecasting and for analysis of actual performance. Its purpose is to determine what actual cash is, or will be, available at any given time, and from what sources. In this section, we examine cash flow as an analytic technique for actual operations since cash flow forecasting is essentially a budgeting problem. Beaver (cited in Heath, 1978) found that actual cash flow/total debt was the best single indicator of impending bankruptcy. The average of this ratio over the five years prior to bankruptcy produced a 21 percent error rate in predicting which firms would go bankrupt. Its worst prediction was at four years prior to bankruptcy (error rate of 24 percent); its best prediction was at one year prior bankruptcy (error rate of 13 percent). As can be seen, this technique is a more superior estimate of solvency than either liquidity or leverage. Thus it is of considerable importance for a facility administrator to firmly understand this concept and its use to successfully chart the financial affairs of the facility.

To understand cash flow, it is essential that sources and uses of cash be understood. As was pointed out in Chapter 5, the financial reports produced by accrual accounting provide information concerning the overall financial condition of the facility. This involves more than just the cash situation of the facility. In fact, those transactions which effect cash balance are generally perceived to have just the reverse impact on the overall financial condition. If, for example, a facility increases an asset through inventory, accounts receivable, or equipment, these events are generally viewed as favorable to the overall financial situation since they improve the facility's ability to generate revenue in the future. However, at the time of increase, they use cash since its availability is decreased in the immediate circumstance. Similarly the decrease of a liability (payment of a debt), while generally viewed as positive to the overall financial condition because it reduces future payments, also uses cash at the time. The 1) decrease of an asset, for example, received for payment of accounts receivable or sale of inventory; 2) the increase of a liability, for example, increasing accounts payable (a form of borrowing); and 3) actually borrowing money (increase bank note payable) are all sources of cash. An increase in the fund balance increases, or is a source of cash, and a decrease in the fund balance is a use of cash. These transactions and their impact on cash could then be summarized (see Exhibit 6-1).

EXHIBIT 6-1
Effect of Accounting Transactions on Cash

	Cash Effect	
Transaction	Increase (Source)	Decrease (Use)
Increase Asset		X
Decrease Asset	X	
Increase Liability	X	
Decrease Liability		X
Increase Fund Balance	X	
Decrease Fund Balance		X

The projection and actual calculation of cash flow allows the facility to plan for and maintain a safe level of available cash, that is, sufficient cash on hand to meet immediate needs given some sudden downturn of events. This safety range should include a lower limit to allow for payment of immediate debts should additional cash be delayed, and an upper limit which would identify excess cash available for investment or for use in operations delayed pending better cash situations. It is not advisable to set these limits in absolute terms since what would be "inadequate" or "excessive" could be largely dependent upon the size of the facility's current debt. Thus a cash ratio to current liabilities seems to be most useful for establishing these limits.

Short-term solutions to inadequate cash flow could include slowing down the payment of accounts payable. This is, in effect, borrowing from your creditors, a practice which may increase interest costs in an undesirable fashion, and impair future credit. Other short-term solutions could include obtaining deferred revenue such as securing advances from funding sources (for example, United Way, private donors, granting agencies), delay the acquisition of fixed assets (land, buildings, and equipment), or obtaining a bank loan. It must be emphasized that these are only short-term measures; the only permanent solution to cash flow problems is to improve the overall operating gain. This can only be accomplished by decreasing expenses or increasing revenue, but preferably both. As cash flow surpasses the desirable upper limit, the facility should first suspend the temporary measures taken to increase cash flow. If a cash surplus is still produced, make appropriate investments to produce revenue which can ultimately be reinvested in the program.

Activity

Activity involves the turnover of some asset or liability. It is assumed there is some optimum level of turnover which would maximize the facility's cash position, liquidity, solvency, and profitability. Thus, activity ratios can be viewed as indicators assisting the CEO to make better financial decisions. There are many meaningful activity ratios which can be computed; however, only three will be examined—receivable turnover, payable turnover, and inventory turnover ratios.

Receivable turnover ratio. Turnover for this asset account can be calculated by dividing the sum of the net sales on credit for the previous 12 months by the average of the accounts receivable for the same period. This will yield the turnover rate for accounts receivable.

That is $S \div M = T$, and $365/T = J$

Where

S = Net sales on credit for previous 12 months

M = Average accounts receivable for previous 12 months

T = Turnover ratio

J = Receivable collection period in days

In addition to calculating a general ratio, it is also possible to calculate the ratio for each major credit customer. These calculations will allow the executive to more adequately plan for cash flow, evaluate credit policies in general, and determine specific credit practices with any given major credit customer. Some of the credit policies which may be considered are the amount of credit extended to any given or specific credit customer, the maximum allowable time to pay receivables, and penalties or interest charges to be assessed. The higher the ratio of turnover, the more liquid the receivables the facility is holding, and the more liquid the total asset picture. The receivable collection period can be estimated by dividing 365 by the receivable turnover ratio.

Payable turnover ratio. The payable turnover ratio for a facility can be calculated by dividing the sum of the credit purchase for the same period. This will yield the payable turnover ratio for the facility.

That is $U \div Z = P_r$, and $365/ P_r = H$

Where

U = Total credit purchases for previous 12 months

Z = Average accounts payable for previous 12 months

H = Average payment period in days

Pr = Payable turnover ratio

This measure is most frequently used by creditors in evaluating whether to extend credit to an enterprise, and if so, what credit policies to apply. This ratio can be helpful to executives in assessing the facility's potential credit rating, that is, the desirability of the facility for extension of credit by a lending institution and under what terms. To the extent that the facility's credit rating is helpful in obtaining, under the best possible terms, credit necessary to conduct its business affairs in an orderly and profitable fashion, it is in their best interest to maintain a good credit rating. If executives fail to monitor the facility's performance in this area, they may not be able to obtain credit purchases, and would be forced to use cash (when cash is at a premium) just to continue operations. If credit can be obtained, it may be at a very undesirable interest rate, or other undesirable terms. The average payable payment period can be estimated by dividing 365 by the payable turnover ratio.

Inventory turnover ratio. Most facilities carry a number of inventories on their balance sheets, for example, supplies, raw materials, goods in process, and finished goods. While these inventories are carried as assets in recognition of their potential value when sold, it must be remembered that they represent accumulated expenses the facility has already incurred. Thus, a facility can make itself cash poor by overinvesting in inventory prior to actual sales and thereby impair its ability to sustain the rest of its operation in a healthy fashion. Worse, the facility could be overproducing the prime product for its available market while blissfully recording each day's expense as an increased asset, the value of which will not be there when the day of reckoning comes and the finished goods cannot be sold, or can be sold only at a price well below the facility's investment in the item. In either case, it is of considerable importance for the CEO to monitor the relationship of the cost of goods sold to the average inventory cost for the period to avoid these negative potential outcomes and, at the same time, provide a sufficient inventory to be able to meet demand in a timely fashion.

That is $G \div V = Y$, and $365/Y = W$

Where

G = Cost of goods sold for the period

V = Average inventory cost for the period

Y = Inventory ratio

W = Average days to convert inventory to cash

This provides management with a monitoring measure for the efficiency of inventory utilization and control. Periodic ratio results allow fluctuations to be readily identified and indicates how often the inventory is cycled. Excessive inventories are avoided and inadequate inventories became the exception rather than the rule. By dividing the ratio results into 365, the facility administration can estimate the number of days it would take to convert the inventory to cash. Turnover ratios may be calculated for all of the facility's inventory accounts.

Profitability

Profitability for a rehabilitation facility would generally be described as its ability to increase its fund balance (what it owns of what it has by way of assets). Some would argue that this concept is not particularly germaine to a not-for-profit corporation whose purpose is to increase the independence and quality of life of handicapped people. To the extent that a facility is not breaking even (losing its fund balance), profitability is an important concept in terms of facility survivability. If loss of fund balance was to continue indefinitely, the facility would soon go into receivership and cease to operate for anyone's good. Moreover, some would argue unless a facility shows some profitability, it can never increase the services it provides, and can never improve its cost of providing these services. It is rare indeed to find a facility meeting the full needs of the handicapped population it is designed to serve, or is being operated in the most efficient

manner possible. To the extent it is not, the concept of profitability should at least be considered.

Net profit ratio. One relatively straightforward measure of profitability is the net profit ratio, that is, the net profit divided by the fund balance.

That is $N \div F = N_r$

Where

N = Net profit
F = Fund balance
N_r = Net profit ratio

If the net profit is a loss, this ratio will be negative and reflect a loss of ownership which, if it was to continue, would mean the ultimate demise of the facility. If the net profit was zero and the facility was operating in a highly solvent manner, the facility could continue at its current level of service with no improvements. It is highly unlikely that any entity can maintain an absolutely even level of operation with no variability, thus the potential for loss threatens facility survival if the ratio takes a downward turn. Moreover, most facilities do not operate at optimum solvency; some profit cushion is therefore highly desirable. The optimal ratio of net profit to fund balance cannot be stated in absolute terms since it could depend on any number of external conditions, the overall facility solvency, and the extent it is meeting the total needs for which it was established. Therefore, the optimum ratio for any particular facility at any particular time should be based on a plan which takes these factors into account.

Return on investment ratio. Another concept of some value when assessing profitability is return on investment (ROI). ROI is a concept borrowed from industry which allows investors to determine profit made on the money they invested in the operation. With slight modification, the concept has some utility for a rehabilitation facility.

The ratio is determined by dividing net profit by the amount that corresponds, in the context of the not-for-profit rehabilitation facility, to the investment made by stockholders in a for-profit enterprise. By way of example, two ROI denominators are defined here: amount donated and total assets. Actually, the net profit ratio determined above is a special form of a ROI which uses fund balance as the denominator in the calculation of the ratio. The inherent weakness of the ROI ratio is that profitability (in terms of revenues generated in excess of expenses) is not the only, or even the most important, benefit of a rehabilitation facility. (This deficiency is corrected to some extent by the benefit/cost ratio discussed in the next section.) Thus, the ROI concept should be used with some caution as to its adequacy in representing the full benefits obtained by a not-for-profit operation.

If the CEO is interested in the ROI calculated on the basis of the funds donated to operate the facility, the following formula would be employed.

That is $N \div K = K_d$

Where

N = Net profit
K = Amount donated
K_d = Amount donated return on investment ratio

To the extent that a person donates money to a rehabilitation facility to solve some important social problem, and to the extent that a rehabilitation facility must invest any profit (surplus) it generates back into the solution of that same problem, ROI gives an indication to the donor of how funds have been managed.

A second ROI of interest would be the relationship between net profit and total facility assets.

That is $N \div A = A_t$

Where

N = Net profit
A = Total assets
A_t = Total assets return on investment ratio

A facility's board of directors and others, such as potential lenders and donors, would be interested in the ROI/total assets on the basis that the total assets represent what the facility has to work with to produce the desired result. This form of the ratio is therefore a measure of stewardship, that is, how well the facility used what it had to generate some degree to profitability. Clearly, there can be no absolute desirable or even minimum level of ROI for rehabilitation facilities. This would be intimately related to the nature of the social problem, the environmental context, and the efficiency of the facility in question. Nevertheless, the concept is an important one for facility executives in evaluating the efficiency of their operations.

Benefit cost ratio. This approach to profitability is a concept essentially unique to not-for-profit or public programs. It involves dividing the total cost of the operation into the estimated benefit of its outcomes.

That is $X \div K = X_r$

Where

X = Estimated benefit
K = Total cost of operation
X_r = Estimated benefit cost ratio

The issue of determining the benefits achieved and estimating their financial value is complex. Any number of approaches and formulae have been developed to achieve that end for the myriad of social service agencies. It is well beyond the scope of this document to examine, in depth, the multitude of methods available to calculate this important concept. Suffice it to say that rehabilitation was a pioneer in the development of this concept and has a good record, when compared to most other human services regardless of the formula used. A simple, straight forward example will be provided later in this chapter of how to approach this problem but it is in no way intended to suggest the optimum and most accurate method. The reader is encouraged to review the following sources for more information.

Ciecka, J.D., Fabian, R.G., & Merilatt, D.S. The economic benefits of rehabilitation. *Journal of Rehabilitation Administration,* in press.

Conley, R.W. *The economics of vocational rehabilitation.* Baltimore: Johns Hopkins Press, 1965.

Lindsay, C.M. Measuring human capital returns. *Journal of Political Economy,* 1971, 79, 1195-1215.

Mishan, E.J. *Cost-benefit analysis.* New York: Praeger Publishers, 1976.

Struthers, R.D. A benefit/cost model developed in a state vocational rehabilitation agency. *Journal of Rehabilitation Administration,* 1977, 1(3), 26-37.

Performance to Plan

The most usual method for assessing actual performance to plan is to present the facility's actual operating statement by function, compare it with some standard, and present a variance either in actual dollars or in percents. The most frequently used standards are budget for the month, year to date, last year at this time, last year to date, or previous years' average. The use of historical data (previous years) has the appeal of providing performance to an actual attained level of performance. It runs the risk, however, of not reflecting current year plans and conditions. Comparison to budget, while clearly superior, is burdened with the assumption that the budget was a good plan to begin with and thus provides a good indicator of where the facility should be. This method of financial analysis is a very useful tool in the hands of executives who view financial analysis as an important part of their job. However, it provides no absolute solutions to problems thus identified. Rather, it requires further study and analysis coupled with sound decisions as to appropriate corrective action (see Chapter 4, for an example of this type of analysis).

Standards

All previously mentioned methods of financial analysis require the use of some standard or scale against which to judge actual performance. These standards are based on one of the following:

1. Previous performance of the facility,
2. Some predetermined desirable level of performance, or
3. Performance of other similar facilities under like conditions.

Unfortunately, most facilities do not have such historical data readily accessible, and do not state their financial plans in these terms. Worse, the facility industry does not regularly gather data with which to formulate such industry standards. This section contains some ratios calculated on a sample of 31 rehabilitation facilities who provided their 1979 audit report as a part of their response to a census of rehabilitation facilities in Illinois conducted by the Illinois Association of Rehabilitation Facilities under contract with the Illinois Department of Rehabilitation Services. The ratios were calculated using data collected (see Exhibit 6-2): cash ratio, quick ratio, current ratio, fund balance ratio, net profit ratio, and return on investment ratio (ROI). The net profit ratio and the ROI/total assets ratio are similar. The numerator of each is net profit. The denominator of the net profit ratio was fund balance while the denominator of ROI ratio was total assets. While related, it is apparent that the net profit ratio was the more favorable for the facilities in the study. Executives could calculate their facility's ratio as per the instruction in this chapter and compare the results with

EXHIBIT 6-2

Summary or Ratio* Findings for 31 Illinois Rehabilitation Facilities for 1979

Ratio/ Statistic	Cash Ratio	Quick Ratio	Current Ratio	Fund Balance Ratio	Net Profit Ratio	ROI/ Total Assets Ratio
25th Percentile or Q_1	.1	.96	1.1	.137	.0275	.03
50th Percentile or Q_2 or Median	.255	1.5	1.55	.475	.15	.067
75th Percentile or Q_3	2.215	5.25	7.2	.87	.465	.202
X or mean	2.219	4.47	5.36	.47	.202	.17

*All ratios reported to 1 as the denominator, e.g., 1.55:1

the above table. In the exhibit, 50 percent of the facilities had current ratios of less than 1.55:1. Thus, if a facility had a current ratio of less than one, it would fall in the first quartile (bottom 25%) of the facilities reporting and may be cause for concern. It should be noted that the mean, as a measure of central tendency, was unduly influenced by the high ratios of a few facilities on all ratios except the fund balance ratio. Thus, the median, or Q_2, was probably the better indicator of central tendency on the data presented. Finally, for those ratios for which we have a standard for rehabilitation facilities, that is, cur-

rent ratio 1.5:1 and fund balance ratio 0.4:1 (Goodwill Industries of America, not dated), Q_2 in these findings approximates the minimum safe level (1.5:1 and .4:1 respectively).

Example

NOVA management never exhibited a great deal of interest in the actual fiscal condition of the organization. The board of directors and all previous chief executive officers (CEO) were very satisfied with the year-to-year status quo and the very basic information obtained from the financial statements. The present CEO has taken a more assertive and dynamic role in the fiscal/financial affairs of the facility. The financial statements are considered the basis for further analysis and not as the absolute end product. They become a means to an end product, not the terminal point of any financial investigation. After reading this manual, the CEO decided to use the following ratios and other indices of financial performance:

1. Liquidity Ratios - directly related to the ability of the organization to convert assets to cash in order to pay current liabilities.
   a. Current ratio
   b. Acid test on quick ratio, and
   c. Cash ratio.
2. Leverage -
   a. Fund balance ratio,
   b. Indebtedness ratio, and
   c. Debt to asset ratio.
3. Activity - related to the turnover of inventories, receivables and payables.
   a. Inventory turnover ratio,
   b. Receivable turnover ratio, and
   c. Payable turnover ratio.
4. Profitability - Is the facility making enough to continue and perpetuate its endeavors? Could it expand? Can it accrue funds to protect itself in an emergency?
   a. Net profit ratio,
   b. Return on investment ratio, and
   c. Benefit cost ratio.
5. Performance to plan - it was decided to look at the facility's budget and financial statements from the standpoint of trend analysis or percentage analysis. An attempt to spot trouble areas using historical data.
   a. Monthly budget comparisons,
   b. Year to date budget comparisons,
   c. Last year actual performance, and
   d. Previous years average.

The CEO developed a vertical two-way communication network for transmitting the results of the analysis to be performed monthly in most cases. Upward transmittal was directed to the board finance committee who, in turn, would include the data in its reports to the full board. Downward information was based on the "need to know" principle. The production coordinator received the necessary feedback on the workshop area (inventory turnover, etc.) and the rehabilitation coordinator was provided information on benefit cost and other related analyses. No one person was overloaded with ratios that could not lead to direct action. An in-house management information network was designed to simplify the gathering of the data and the timely dissemination.

NOVA developed an integrated management-by-objectives and zero-base budgeting planning method which required a great deal of staff input. Ratios, expressed as goals, quickly became a part of this system. The data from the ratio analysis were also integrated into the program evaluation system of the facility, found its way into the management report, and became a useful tool for exhibiting financial stability to funding sources and other interested parties. Most grant and foundation support requests soon contained a section on past and present status of the organization in relation to solvency, leverage, profitability, and performance to plan.

Financial statement analysis became a viable tool for NOVA administrators; it formed the basis for sound decision making. Full disclosure was further enhanced, and a method was obtained for protecting the public's investment in this human service organization.

Exhibits 6-3 to 6-7 represent the outside audit report for the year ending December 31, 1980, with comparative totals for 1979.

Ratios were obtained using data from the financial statements of NOVA Industries. Some of the basic information was not available to the analyst from the financial statements alone and had to be accumulated from a variety of other sources. For example, the inventory information for determining the turnover ratio was not part of the statements, nor was budget data.

Liquidity

This is the degree to which the organization can meet its current obligations. Liquidity implies the ready ability to convert assets into cash or to obtain cash. These measures are usually veiwed in the "short term" or one year basis. A lack of liquidity may mean that the enterprise is unable to avail itself of profitable opportunities or that there is a lack of freedom of movement. A more serious lack of liquidity means the forced sale of assets and, if uncorrected, can lead to insolvency or bankruptcy.

Current ratio. The current ratio measures the degree to which current assets cover current liabilities (Vichas, 1979), and it indicates the safety margin available (if any) to cover any possible shrinkage in the value of current assets. As such, it is an indicator of the available resources, at a given moment in time, which may be used to

meet obligations. The current ratio measures the ability of present current assets to discharge existing current liabilities. It considers the excess, if any, as a liquid surplus available to meet imbalances in the flow of funds and other contingencies. Inserting the appropriate figures from Exhibit 6-6 (1980 total column) into the current ratio formula (see page 88), we would obtain a ratio of 4.64:1.

$$\frac{\$128,389.76}{\$\ 27,665.42} = 4.64:1$$

EXHIBIT 6-3
NOVA Industries, Incorporated

Statement of Support, Revenue, Expenses and Changes in Fund Balances for the Year Ending December 31, 1980, with Comparative Totals for 1979.

Public Support & Revenue	General Fund	Property Fund Unrestricted	Property Fund Restricted	Total 1980	Total 1979
PUBLIC SUPPORT:					
Contributions	$ 35,350.30	$	$	$ 35,350.30	$ 19,288.77
Non-Cash Contributions	1,540.93			1,540.93	100.00
Title XX	194,420.84			194,420.84	218,781.18
V.R. Tuition	8,968.05			8,908.05	8,922.28
Social Security	41,988.83			41,988.83	29,847.87
Residential Living Grant					1,842.00
Equipment Grant					6,982.64
County Mill Levy	57,308.19			57,368.19	41,582.88
Revenue Sharing					4,900.00
Senate Bill 649	28,312.00			28,312.00	21,892.00
D. D. Grant					8,349.00
United Way	981.50			981.50	
Fed/State Reimbursement	3,678.83			3,678.83	
Total Public Support	$372,549.47	$	$	$372,549.47	$362,488.62
REVENUE:					
Interest Income	$ 4,888.66	$	$	$ 4,888.66	$ 2,568.44
Private Tuition	8,462.68			8,462.68	1,051.00
Sale of Equipment	305.00			305.00	575.00
Subcontract	11,817.74			11,817.74	15,885.94
Prime Manufacturing	2,528.85			2,528.85	3,878.24
Miscellaneous	144.85			144.85	1,252.80
Total Revenue	$ 28,147.78			$ 28,147.78	$ 25,211.42
TOTAL SUPPORT & REVENUE	$400,697.25			$400,697.25	$387,700.04
Functional Expenses	$398,007.81	$	$	$398,007.81	$315,785.10
Excess of (Deficit) of Revenue over Expenditure	$ 2,689.44	$	$	$ 2,689.44	$ 71,914.94
Other Charges in Fund Balances					
Capital Expenditure	$ (8,181.88)	$ 8,181.88	$	$	$
Reclassify Depreciation Expenditure	17,401.88	(15,747.73)	$ (1,654.15)		
Disposition of Fund Assets		(268.44)		(268.44)	
Fund Balances at Beginning of Year	$ 90,129.47	$ 61,087.87	$ 4,568.15	$155,785.49	$ 83,870.55
Fund Balances at End of Year	$102,038.91	$ 53,253.58	$ 2,914.00	$158,206.49	$155,785.49

EXHIBIT 6-4
NOVA Industries, Incorporated

Comparative Statement of Expenses for Year Ending December 31, 1980, with Comparative Totals for 1979.

OBJECT EXPENSES (See Exhibit 6-5)	1980	1979
Staff Salaries	$189,223.27	$149,198.58
Fringe Benefits	7,811.59	6,118.24
Payroll Taxes	11,899.59	11,930.75
Client Wages	18,858.56	16,888.68
Client Payroll Taxes	1,188.98	
Contract Services	4,468.40	7,963.88
In-service Training	786.93	1,449.96
Telephone	5,136.41	4,952.85
Insurance	6,185.94	3,417.88
Professional Memberships	1,940.00	916.68
Repairs and Maintenance	7,108.43	4,181.95
Supplies-general	2,931.88	10,188.90
Supplies-work adjustment	1,089.68	1,099.58
Supplies-food	22,199.78	18,950.87
Supplies-janitorial	5,128.86	
Utilities	12,910.00	10,912.90
Recreation	1,184.05	879.88
Miscellaneous	1,999.12	1,988.58
Vending Machines	628.59	
Staff Recruitment	156.90	
Clients Personal Funding	9,127.88	2,961.88
Rent	24,182.91	22,381.00
Community Education	229.19	
Supplies-production	6,169.22	2,889.19
Small Tools	2,997.84	2,572.57
Printing	1,185.19	699.38
Postage	982.29	607.98
Accounting	6,167.00	3,950.00
Accreditation	1,240.00	199.25
Consultants	1,543.88	170.11
Automobile Operating Expenses	19,524.44	8,164.40
Mileage	3,974.78	4,470.87
Home Visits		1,254.59
Educational Materials	344.85	451.83
Depreciation	17,401.88	13,971.89
Advertising	99.50	
TOTAL	$398,007.81	$315,785.10

In other words, NOVA has $4.64 in current assets for every dollar it owes in current liabilities. It has a safety margin of $3.14 to use in emergencies and to take advantage of opportunities should they avail themselves. NOVA is in an extremely enviable position in this regard; the present "rule of thumb" is that anything below 1.5:1 is a problem indicator. From the standpoint of the organization's creditors or potential creditors, there is safety for the claims of the lending institutions. The exceptionally high ratio may also mean a wasteful accumulation of resources which do not earn an appropriate return for the enterprise. Therefore, a decision may be to reinvest some of these current assets into needed fixed assets or to make some longer term investments.

Quick ratio. This is often called the "Acid Test" and is intended to present a more conservative measure of liquidity then the current ratio. This analysis views cash as the ultimate form of liquidity and is a measure of the organization's ability to survive under more adverse conditions (when assets must be quickly converted to cash). Data obtained from Exhibit 6-6 (1980 total) were used below in the quick ratio formula (see page 88) to establish the ratio 4.08:1, as follows:

$$\frac{\$112,979.86}{\$\ 27,665.42} = 4.08:1$$

When $112,979.86 = $128,389.76 − ($9861.10 + 1400.00 + 4148.80) NOVA is still in an enviable position even under the more conservative analysis. The "rule of thumb" for this ratio (1:1) is far exceeded (Bittel, 1978). The facility obviously does not depend on inventories or prepaids to meet its current obligations. A large safety margin is available to make creditors breathe easier. The elimination of inventory and prepaids from this calculation is based on the assumption that these are the least liquid of all the current assets and would be the most difficult to turn into cash on short notice.

Cash ratio. The cash ratio is a stringent measure of the organization's ability to pay obligations during emergencies, that is, the ratio of cash on hand compared to current liabilities. Cash on hand includes bank accounts and other savings without restrictions. Accounts receivable are not included in this calculation. Since current liabilities usually have to be paid in cash, it is important that there is sufficient cash to meet these expenses.

The facility decided to do a monthly analysis of this important ratio. The following data were taken from Exhibit 6-6 (1980 total column):

$$\frac{\$6,681.58}{\$2,305.45} = 2.89:1$$

Through computation of the cash ratio formula (see page 88), it is apparent that the facility has $2.89 in cash for every dollar it has in current liabilities.

Leverage

Financial leverage means the use of a debt which does not unduely encumber the organization; there is, in other words, a financial benefit from advantageously placed debt. Leverage is positive when the return on assets is higher than the cost of debt. Sometimes called coverage ratios, these measures indicate how well a firm can cover its fixed charges from its operating profits, and the relative degree to which the owners versus the creditors have financed the organization's investments.

In this relationship of ownership to debt is an inherent assessment of the long term financial health of the organization.

EXHIBIT 6-5
NOVA Industries, Incorporated
Statement of Functional Expenses by Program for the Year Ending December 31, 1980

FUNCTIONAL EXPENSES	General Administration	Work Activity	Residential	Voc. Eval.	Transportation	Production	Skills Training	Recreation	TOTAL
Staff Salaries	$37,844.65	$18,922.33	$ 9,461.16	$18,922.33	$9,800.00	$ 56,766.98	$33,565.82	$3,940.00	$189,223.27
Fringe Benefits	1,562.32	781.10	390.58	781.10	390.58	2,343.48	1,341.20	221.23	7,811.59
Payroll Taxes	2,379.92	1,189.96	594.98	1,189.96	612.00	3,569.88	2,122.69	240.20	11,899.59
Client Wages		3,908.76				10,349.80	4,600.00		18,858.56
Client Payroll Taxes		249.69				653.94	285.35		1,188.98
Contract Services	1,893.68	446.84	223.42	290.81	33.00	1,078.65	421.00	81.00	4,468.40
Inservice Training	181.00		223.00		85.00	210.00	87.93		786.93
Telephone	3,081.85	360.00	110.00	215.00	360.00	845.36	61.20	103.00	5,136.41
Insurance	1,237.19	927.89	433.02	742.31	185.58	1,855.78	702.00	102.07	6,185.94
Professional Memberships	1,940.00								1,940.00
Repair and Maintenance	1,421.68	1,066.26	497.59	853.01		2,345.78	824.00	100.11	7,108.43
Supplies-general	586.38	439.78	205.23	351.83	87.96	879.56	293.19	87.95	2,931.88
Supplies-work adjustment		305.11	446.77				108.97	228.83	1,089.68
Supplies-production		1,912.46				4,256.76			6,169.22
Supplies-janitorial	1,025.77	769.33	359.02	615.46	153.87	1,538.66	512.89	153.86	5,128.86
Supplies-food			5,549.95				16,649.83		22,199.78
Utilities	2,582.00	1,936.50	903.70	1,549.20	387.30	3,873.00	1,291.00	387.30	12,910.00
Recreation		94.72	224.96	130.29				734.08	1,184.05
Miscellaneous	1,250.12			395.40		353.60			1,999.12
Vending Machines		108.10	431.30			89.19			628.59
Staff Recruitment	156.90								156.90
Client Personal Funding		8,476.14	651.74						9,127.88
Rent	4,836.58	3,627.44	1,692.80	2,901.95	725.49	7,254.87	2,660.12	483.66	24,182.91
Community Education	229.19								229.19
Small Tools		530.33		181.70		1,994.41	291.40		2,997.84
Printing	533.34	108.00	96.80	228.00		104.61	114.44		1,185.19
Postage	697.43	96.53		102.40		85.93			982.29
Accounting	6,167.00								6,167.00
Accreditation	1,240.00								1,240.00
Consultants			339.65	632.99		247.03		324.20	1,543.88
Automobile Oper. Exp.					19,524.44				19,524.44
Mileage					3,974.78				3,974.78
Educational Materials		108.10		212.41		24.34			344.85
Depreciation	3,480.38	2,610.28	1,218.13	2,088.23	522.05	5,220.56	1,914.21	348.04	17,401.88
Advertising	99.50								99.50
TOTAL	$74,426.88	$48,975.65	$24,053.80	$32,384.38	$36,842.05	$105,917.83	$67,871.58	$7,535.64	$398,007.81

EXHIBIT 6-6
NOVA Industries, Incorporated
Comparative Balance Sheet Year Ending December 31, 1980, with Comparative Totals for 1979.

	ASSETS			TOTAL	
Current Assets	General Fund	Property Fund Unrestricted	Property Fund Restricted	1980	1979
Cash	$ 80,179.00	$	$	$ 80,179.00	$ 50,188.99
Accounts Receivable	32,800.86			32,800.86	50,985.12
Inventory	9,861.10			9,861.10	5,888.28
Prepaid Rent	1,400.00			1,400.00	1,250.00
Prepaid Insurance	4,148.80			4,148.80	3,185.47
Total Current Assets	$128.389.76	$	$	$128,389.76	$111,497.86
Fixed Assets					
Workshop Equipment	$	$ 9,460.29	$	$ 9,460.29	$ 5,168.81
Residential Furniture		13,200.85		13,200.85	12,932.82
Office Furniture		8,920.90		8,920.90	7,111.68
Autos and Trucks		43,825.80		43,825.80	43,925.00
Leasehold Improvements		13,150.06		13.150.06	10,999.25
Autos & Trucks—Restricted			5,828.00	5,828.00	5,828.00
	$	$88,557.90	$5,828.00	$ 94,383.90	$ 85,965.56
Accumulated Depreciation		33,989.75	2,914.00	36,903.75	18,806.49
Net Fixed Assets	$	$54,568.15	$2,914.00	$ 57,482.15	$ 67,159.07
Total Assets	$128,389.76	$54,568.15	$2,914.00	$185,871.91	$178,656.94
	LIABILITIES AND FUND BALANCES				
Liabilities					
Accounts Payable	$ 18,121.29	$	$	$ 18,121.29	$ 22,335.03
Payroll Taxes Payable	837.80			837.80	462.54
Sales Tax Payable	139.97			137.97	73.87
Accrued Payroll	856.89			856.89	
Deferred Revenue	6,394.90			6,394.90	
Notes Payable		$ 1,314.57		1,314.57	
Total Liabilities	$ 26,350.85	$ 1,314.57	$	$ 27,665.42	$ 22,871.44
Fund Balance at End of Year	$102,038.91	$53,253.58	$2,914.00	$158,206.49	$155,785.49
TOTAL	$128,389.76	$54,568.15	$2,914.00	$185,871.91	$178,656.93

EXHIBIT 6-7

NOVA Industries, Incorporated

Notes to Financial Statements
December 31, 1980

Note 1 The financial statements are presented on the accrual basis of accounting. All fixed assets are stated at cost. Marketable securities are stated at fair market value. Depreciation is provided on a straight line method.

Note 2 Property fund restricted. This fund consists of one flat bed truck received May 3, 1975 from the State Department of Motor Vehicles. Title to assets in this fund will not pass to NOVA INDUSTRIES, INCORPORATED, until May 3, 1981.

Note 3 Notes payable. This account consists of the following:

	Current	Long Term	Total
Second Savings & Trust	$489.95	$1,873.91	$2,363.86

Note 4 Leasehold improvements. NOVA holds the lease on the property located at 1503 South Michigan which houses the residential program. The lease is for 10 years at $4,800 a year.

Fund balance ratio. Sometimes called the ownership ratio, the fund balance ratio is based on the principle that the amount of assets is not as important as the ownership of assets, that is, what you own compared to what you have. Again, utilizing the appropriate 1980 data from Exhibit 6-6 in the fund balance formula (see page 89), a ratio of 0.85:1 is realized, as follows:

$$\frac{\$158,206.49}{\$185,871.91} = .85:1$$

The facility owns $.85 of every dollar it has in assets, or stated differently, if the organization sold everything, it would have 85 cents on the dollar left over. The minimum safe level according to the "rule of thumb" is .40:1.

Indebtedness ratio and the debt to asset ratio. Sometimes referred to as the debt/equity ratio, the indebtedness ratio is an indicator of the degree to which the organization is dependent upon borrowed funds to finance its total operation (what is owed to what is owned). Rarely should total liabilities exceed tangible net worth because creditors will be assuming more risk than stockholders (Vichas, 1979). The ratio was illustrated below using the appropriate 1980 figures from Exhibit 6-6 in the indebtedness formula (see page 89):

$$\frac{\$\ 27,665.42}{\$158,206.49} = .17:1$$

The debt to asset ratio provides essentially the same information as the indebtedness ratio to the extent that the facility has what they own. While the two ratios are roughly equal, they do display the information from a slightly different perspective. The debt to asset ratio was computed using the formula on page 89 and the appropriate 1980 data from Exhibit 6-6, as follows:

$$\frac{\$\ 27,665.42}{\$185,871.91} = .15:1$$

The lower the indebtedness ratio, the lower the debt pressure on the facility in terms of annual finance charges. Creditors feel safer with a lower ratio, and are therefore more willing to lend. For every dollar NOVA owns, it has financed, or owes, $.15. The cushion lending institutions look for, definitely exists at NOVA. Similarly, the debt to asset ratio indicates the total assets provided by a facility's creditors. A basic rule is that the entity should have at least as much in system assets as the creditors. In other words, the firm's creditors are contributing 15 cents on every dollar that the facility has at its disposal. Creditors prefer a low debt to asset ratio; a high ratio would indicate an irresponsible debt, or debt beyond a safe limit.

Activity

The administration needs to be aware of some crucial relationships in the various departments that operate within the organization. These ratios are often referred to as efficiency measures, and reflect how effectively an entity manages the various resources it has available. The viable organization maintains a balance between rates of income and the investment it has made in various asset accounts.

Inventory turnover ratio. The inventory turnover ratio impacts the cash flow into the organization. Inventories can represent a substantial proportion of the current asset group. An optimum level should be maintained in order to generate an adequate level of output. Inadequate inventories create production delays and a falling sales volume; excessive inventories present hazards of obsolescence loss, physical deterioration, storage cost, insurance risk, and payment of high interest. This ratio measures the efficiency of the funds invested in inventories, and how often and how rapidly inventory is liquidated. An accrual accounting system developed with cost accounting in mind is a necessity in breaking out these figures.

The inventory turnover ratio was computed using the formula presented on page 91. The appropriate figures to calculate the inventory turnover ratio usually can not be obtained from the financial statements but must be gathered from other internal accounting documents. For this example, data were artificially supplied, as follows:

$$\frac{\$87,091.66}{\$10,895.42} = 7.99:1$$

or

$$\frac{365}{7.99} = 45.7 \text{ average number of days for turnover}$$

The higher the ratio, the more efficient the management. In this case, 45.7 days were required for the facility to cycle its inventory. In other words, NOVA turns over inventory almost eight times during the fiscal period. In an emergency, the facility would need this amount of time to sell its inventory to pay its debts. Use of this procedure could be paramount to the solvency of the facility. The administration and the production coordinator should watch for substantial fluctuations in the ratio over time. This same approach can also be used for the computation of separate turnover rates for the raw materials, work in progress, and finished goods inventory.

Receivable turnover ratio. Receivables represent a right to collect a specific amount of cash from a customer. Experience has shown that the longer receivables remain outstanding, the lower the probability of successful or full collection. Therefore, it is essential that management have a sense for the speed of collection. The receivable turnover ratio is a measure of the efficiency of the funds invested in accounts receivable and how often this amount turns over during the period. It expresses the relationship of business volume to outstanding collectables, and measures how long capital sits in receivables rather than circulating. This should be considered when interpreting the current ratio because it measures the liquidity of the accounts receivable entry (Ler, 1974).

The receivable turnover ratio indicates how many times, on the average, the receivables revolve or are collected. The higher the turnover, the more liquid are current assets, and the greater the cash flow returning to the organization. The data necessary to determine the ratio are not available in the financial statements but from other record keeping sources. In the example below, hypothetical data were plugged into the formula (see page 91) to calculate the ratio:

$$\frac{\$186{,}491.30}{\$\ 49{,}871.36} = 3.74{:}1$$

or

$$\frac{365}{3.74} = 97.6 \text{ average number of days for collection}$$

Nova is turning over its receivables only three and a half to four times a year. It takes over three months to collect the average receivable account. It is estimated that in an emergency, more than 97 days would be needed to convert its receivables account to cash. The administration wants to watch this closely and has started to analyze the internal controls established for receivable collection.

Payable turnover ratio. The facility decided it needed to evaluate its condition in relation to its accounts payable, payroll taxes payable, sales tax payable, and notes payable (current portion). Payable turnover is a reflection of the organization's ability to repay debt or to move short-term debt through the organization in light of increasing interest rates. The data required to calculate the ratio do not appear in the financial statement but are available from other record keeping sources. Using the formula on page 91, hypothetical data were supplied to determine the payable turnover ratio:

$$\frac{\$24{,}516.19}{\$\ 2{,}671.42} = 9.17{:}1$$

or

$$\frac{365}{9.17} = 39.8 \text{ average number of days for payment}$$

The ratio indicates the average payment period required to repay credit purchases (accounts payable). In the case of NOVA, nearly 40 days are required—slightly more than the 30 day turn around expected by many creditors. However, considering the turn around period to the facility from their state and federal funding sources, a 40 day turn-around to creditors is amiable.

Profitability

Profitability provides measures of the relative value of a firm's profits compared with various bases, particularly sales and investment. It measures the joint effects of the extent the agency has met its standards or goals with regard to activity and performance, balanced with the approach to liquidity and leverage. The ratios associated with it summarize the effectiveness of the entity's management.

Net profit ratio. This ratio compares net profit of the facility to facility equity. Using the formula on page 92 and the appropriate data from Exhibit 6-3, the net profit ratio for NOVA is calculated below.

$$\frac{\$400{,}697.25 - 398{,}007.81}{\$158{,}206.49} = \frac{\$\ 2{,}689.44}{\$158{,}206.49} = .02{:}1$$

The facility, in 1980, operated at a two percent profit level. Therefore, NOVA, generated $.02 in profit for every dollar of ownership it had.

Return on investment ratio. The return on investment (ROI) ratio reveals the profitability of the use of all facility resources (Sprouse & Swieringa, 1972). It relates the facility's income to the amount of capital needed to generate the income. This relationship between income and the capital invested in the generation of that income is one of the most valid and most widely recognized measures of agency performance. This measure of effectiveness is a factor in determining the entity's ability to survive financially, to attract supplies of funds, and to expand (Crawford, 1976). As such, the ratio is an indicator of managerial effectiveness, resourcefulness, skill, ingenuity, and motivation.

Two methods of calculating ROI were presented earlier in this chapter. One deals with the relationship be-

tween net profit and amount donated, while the second defined the relationship between net profit and total assets. The example below was developed using the "amount donated" formula on page 92 and financial information from Exhibit 6-3:

$$\frac{\$400{,}697.25 - \$398{,}007.81}{\$372{,}549.47} = \frac{\$\ 2{,}689.44}{\$372{,}549.47} = .007{:}1$$

For every dollar invested in the facility, $.007 are gained. While not profitable in industrial terms, NOVA approximately broke even in 1980.

The second example of ROI explored the relationship between net profit and total assets. Using the ROI/total assets formula from page 92 and data from Exhibits 6-3 and 6-6, the ROI/total assets ratio for NOVA in 1980 was established as follows:

$$\frac{\$400{,}697.25 - \$398{,}007.81}{\$185{,}871.91} = \frac{\$\ 2{,}698.44}{\$185{,}871.91} = .014{:}1$$

NOVA is returning to its owners (the public) $.014 for every dollar held by the organization in the form of assets.

Benefit cost ratio. The cost benefit ratio estimates the facility benefit as a function of the cost needed to generate that benefit. NOVA decided to use the annual average wage of the clients placed in competitive industry compared with the average cost per client of the total rehabilitation program to determine the ratio. [Annual average client wage was $7,072 ($3.40/hour × 40 hours/week × 52 weeks). Total program cost per client was estimated at $4,982.] Using the formula presented on page 92 the following cost benefit for clients was established:

$$\frac{\$7{,}072}{\$4{,}982} = 1.42{:}1$$

In 1980, the facility returned to the external economy $1.42 for every dollar it expended on a client, a 142 percent benefit for society. This is an important measure for accountability and public responsibility. The measure of benefit used in this example is quite conservative since it only considers the first year of client earnings (most clients will hold the position thus obtained for longer than one year), and does not include any estimates for pay increases, taxes paid, or any reduction of welfare or institutional costs. The CEO is encouraged to explore expanded models for estimating benefits and costs contained in the references listed on page 92. Selective distribution of ratio results allows for efficient use of the data. It provides the individuals in the organization with ratio results that impact upon their areas of responsibility, without concern for irrelevant figures and relationships. The ratio analysis distribution sheet (see Exhibit 6-8) shows how NOVA decided to disseminate ratio data.

The composite report presented in Exhibit 6-9 is a managerial tool designed by the CEO to facilitate communication with the board finance committee. The ratios for specific staff members were taken from this format. Also shown are graphs (See Exhibit 6-10) of the various ratios over a four year time period. Graphs could be used for board and other presentations, or as a supplement to the ratio analysis.

EXHIBIT 6-8
Ratio Analysis Distribution Sheet

PRINCIPLE USES / MEASURE	Board of Directors	Accountant	Production Coordinator	Rehabilitation Coordinator	Funding Sources	Creditors	Chief Executive Officer
Current Ratio	X	X			X	X	X
Acid Test Ratio	X	X			X	X	X
Cash Ratio	X	X					X
Fund Balance Ratio	X	X			X	X	X
Indeptedness Ratio	X	X				X	X
Debt to Asset Ratio	X	X				X	X
Inventory Turnover		X	X				X
Reveivable Turnover	X	X	X	X	X		X
Payable Turnover	X	X				X	X
Net Profit Ratio	X	X	X	X	X	X	X
R. O. I.	X	X	X	X	X	X	X
Benefit Cost Ratio	X	X	X	X	X	X	X

EXHIBIT 6-9

Ratio Analysis Composite Report

1. Current Ratio: $128,389.76 / $ 27,665.42 = 4.64:1

Discussion: $3.14 safety cushion above standard. Possibly missed revenue due to current assets on hand - may be unduely affected by receivables, inventory or prepayment.
Trends: Down .14 from 1979-up .28 from 1978

Distribute to:
a. Board of Directors
b. Accountant
c. Funding Sources
d. Creditors
e. CEO

2. Acid Test Ratio: $112,979.86 / $ 27,665.42 = 4.08:1

Discussion: $3.08 safety cushion above standard. Agency has a Liquid Status (see comments above).
Trends: Down .12 from 1979-up .88 from 1978

Distribute to:
a. Board of Directors
b. Accountant
c. Funding Sources
d. Creditors
e. CEO

3. Cash Ratio: $80,179.00 / $27,665.42 = 2.89:1

Discussion: Very high, certainly we have the reserves we need. May indicate a problem in too much cash not being used to generate revenue.
Trends: up 1.69 from 1978 but only up 1.59 from 1979

Distribute to:
a. Board of Directors
b. Accountant
c. CEO

4. Fund Balance: $158,206.49 / $185,871.91 = .85:1
Ratio

Discussion: Above standard—we own 85% of assets.
Goal for 1981 is .80:1.
Trends: 1978 was .53 - 1979 was .52

Distribute to:
a. Board ofDirectors
b. Accountant
c. Funding Sources
d. Creditors
e. CEO

5. Indebtedness: $ 27,665.42 / $158,206.49 = .17:1
Ratio

Discussion: We are financing 15 cents on the dollar.
Trends: going down—should try to stabilize at this time.

Distribute to:
a. Board of Directors
b. Accountant
c. Creditors
d. CEO

6. Debt to Asset Ratio: $ 27,665.42 / $185,871.91 = .15:1

Discussion: No irresponsible debt—the ownership of assets is secure (no change desired at this time).
Trends: down from 1979 by .32 and from 1978 by .33

Distribute to:
a. Board of Directors
b. Accountant
c. Creditors
d. CEO

7. Inventory Turnover Ratio: $87,091.66 / $10,895.42 = 7.99:1

Discussion: May have to look at production scheduling and ordering of raw materials.
Trends: down from 1979 (10.4)-this needs to be investigated!

Distribute to:
a. Board of Directors
b. Production Coord.
c. CEO

8. Receivable Turnover Ratio: $\frac{\$186,491.30}{\$\ 49,871.36} = 3.74:1$

Discussion: Our receivables are not turning over quickly enough; may start to effect cash flow. Consider greater penalties for slow payment and restrict credit to slow payers.
Trends: down from 4.89 in 1979

Distribute to:

a. Board of Directors
b. Accountant
c. Production Coord.
d. Rehab. Coord.
e. Funding Source
f. CEO

9. Payable Turnover Ratio: $\frac{\$24,516.19}{\$\ 2,671.42} = 9.17:1$

Discussion: Ideally we want to reach 10.0 in our turnover; current rate is very respectable however.
Trends: 1979 was 8.42-1978 was 10.08

Distribute to:

a. Board of Directors
b. Accountant
c. Creditors
d. CEO

10. Net Profit Ratio: $\frac{\$\ 2,689.44}{\$158,206.49} = .02:1$

Discussion: 2% net profit—this is marginal performance at best. Trend must be corrected or the facility will be placed at risk.
Trends: Down 1.1 from 1979.

Distribute to:

a. Board of Directors
b. Accountant
c. Production Coord.
d. Rehab. Coord.
e. Funding Source
f. Creditors
g. CEO

11. Return on Investment Ratio: $\frac{\$\ 2,689.44}{\$184,871.91} = .014:1$

Discussion: Virtually a break even, cannot continue to operate at this level without placing the facility at risk.
Trends: Down from 1.2

Distribute to:

a. Board of Directors
b. Accountant
c. Production Coord.
d. Rehab. Coord.
e. Funding Source
f. Creditors
g. CEO

12. Benefit Cost Ratio: $\frac{\$7,072.00}{\$4,982.00} = 1.42:1$

Discussion: Even using this conservative method of calculating benefit this result is excellent.
Keep it up.
Trends: up from 1.29 last period

Distribute to:

a. Board of Directors
b. Accountant
c. Production Coord.
d. Rehab. Coord.
e. Funding Source
f. Creditors
g. CEO

GENERAL COMMENTS ON FINANCIAL ANALYSIS FOR PERIOD

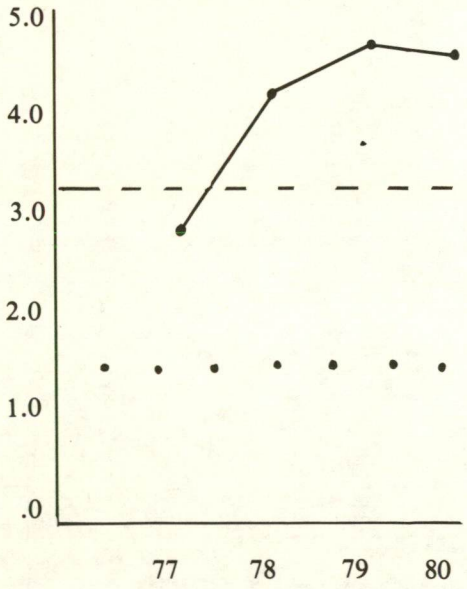
1. The CEO will work with the accountant in reviewing the internal controls for receivables collection.

2. Inventory turnover is affecting the liquidity of that asset account and needs to be investigated.

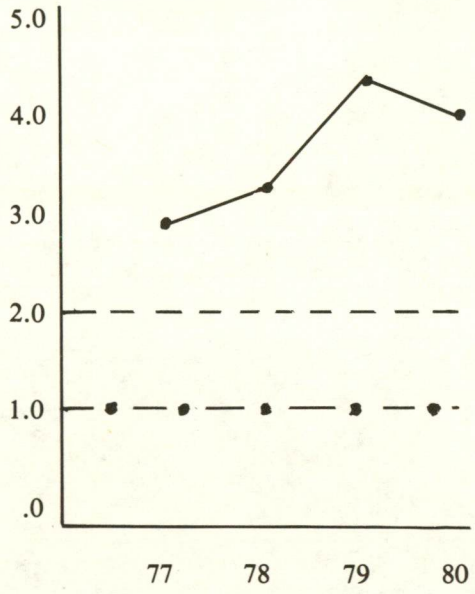
3. Overall profitability is a severe long range problem which must be corrected or the facility could be in jeopardy in the future.

EXHIBIT 6 — 10 Chart of Ratios Years Ending 1977 — 1980

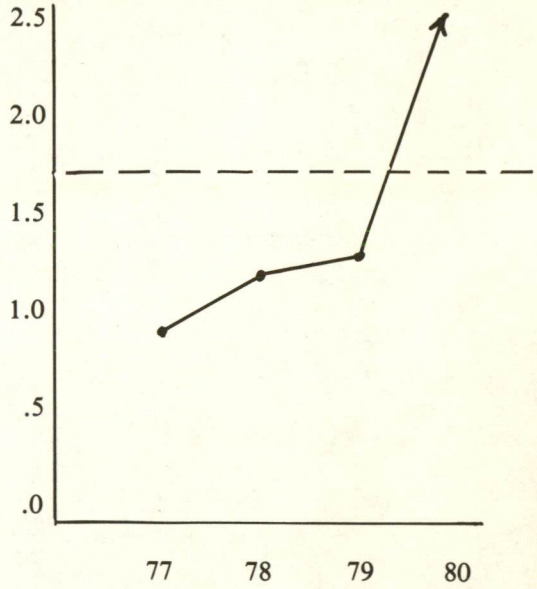
1. Current Ratio



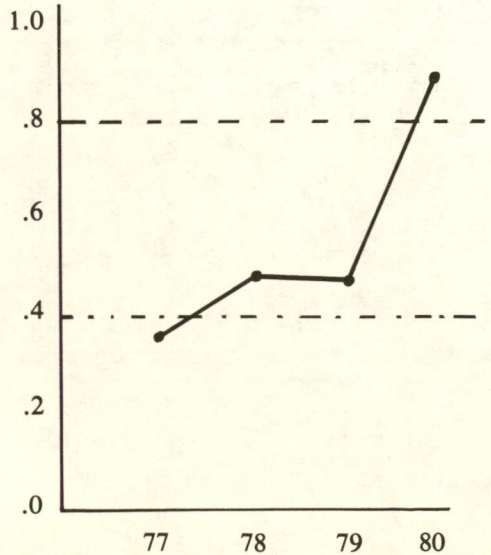
2. Acid Test



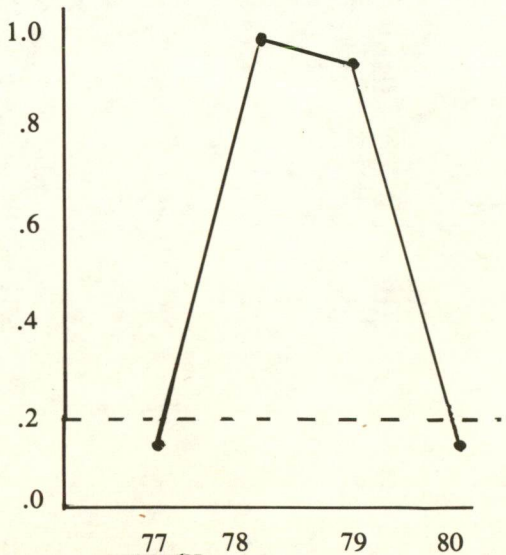
3. Cash Ratio



4. Fund Balance



5. Indeptedness



6. Debt to Asset

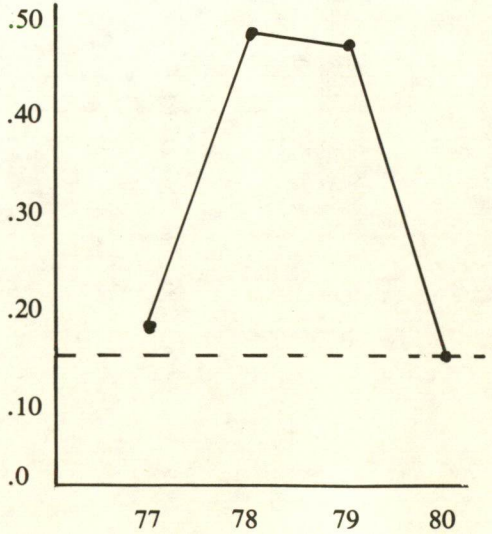
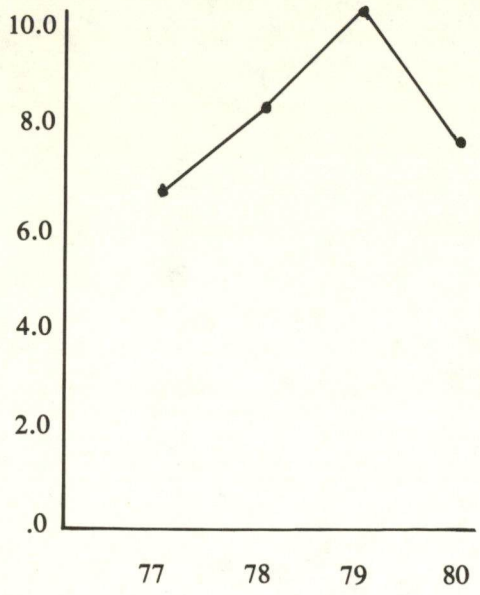
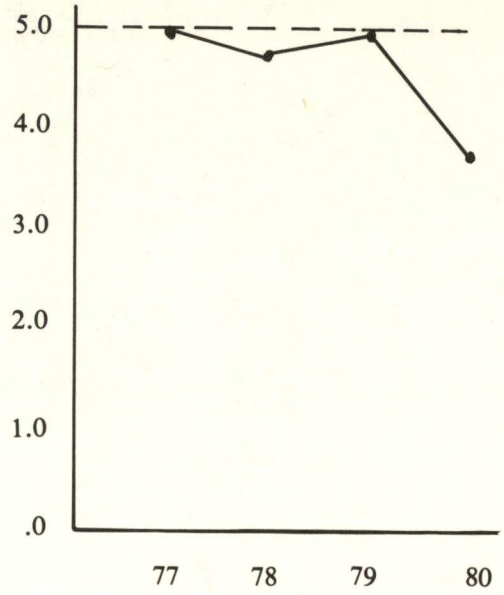


EXHIBIT 6-10
Chart of Ratios Years Ending 1977-1980

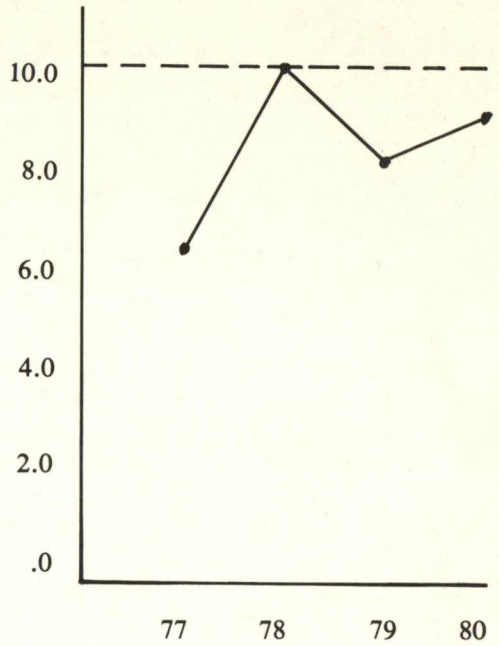
7. Inventory Turnover



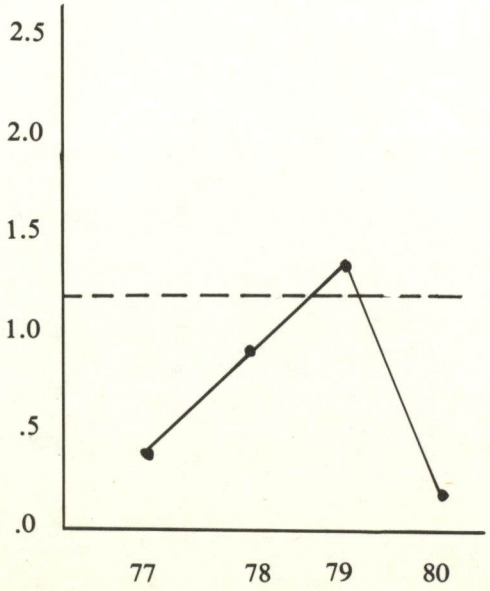
8. Receivable Turnover



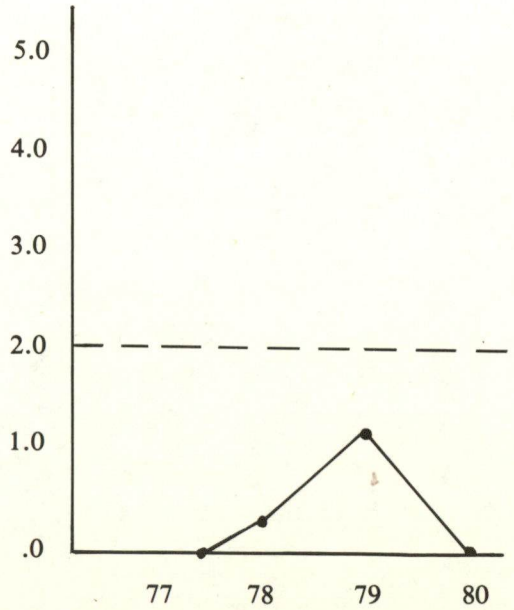
9. Payable Turnover



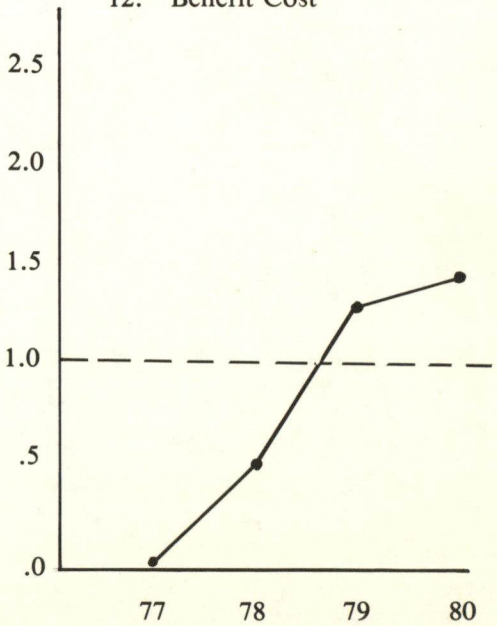
10. Net Profit



11. ROI/Total Assets



12. Benefit Cost



Exercises

1. Using the following audit results (see Exhibits 6-11 to 6-13) and stated assumptions (see Exhibit 6-14) for the year ended December 31, 1978, perform a ratio analysis study of NOVA. The assumptions are necessary in order to complete some of the ratios since the financial statements are not the only source for financial analysis.

   Mathematically determine each relationship and interpret the meaning. Present the results in a Ratio Analysis composite and report.

   a. Current Ratio

   b. Acid Test Ratio

   c. Cash Ratio

   d. Fund Balance Ratio

   e. Indebtedness Ratio

   f. Debt to Asset Ratio

   g. Inventory Turnover

   h. Receivable Turnover

   i. Payable Turnover

   j. Net Profit Ratio

   k. Return on Investment

   l. Benefit Cost Ratio

2. What are "rules of thumb" and how should we in rehabilitation approach them?

3. How should we use ratio analysis results?

4. Explain the purposes of using ratio analysis of financial statements.

5. Explain solvency and its relationship to bankruptcy.

6. Given the following ratio analysis results for 1974, 1975, 1976, and 1977, plot and graph this time series to include the 1978 results from question one.

	1974	1975	1976	1977	1978
Current Ratio	1.22	1.81	2.30	2.96	
Acid Test Ratio	.31	.69	1.08	1.35	
Cash Ratio	.68	.52	.49	.24	
Fund Balance Ratio	.91	.89	.82	.76	
Indebtedness Ratio	.24	.29	.30	.37	
Debt to Asset Ratio	.21	.19	.37	.27	
Inventory Turnover Ratio	8.1	7.3	6.7	*	
Receivable Turnover Ratio	3.3	4.1	3.6	*	
Payable Turnover Ratio	5.4	8.6	9.1	*	
Net Profit Ratio	.03	.07	.23	*	
ROI Ratio	1.01	.73	.84	*	
Benefit Cost Ratio	.98	1.15	1.30	*	

*No data available

EXHIBIT 6-11

NOVA Industries
Comparative Balance Sheet
December 31, 1978
with comparative totals for 1977

ASSETS	TOTAL 1978	1977
Current Assets		
Cash	$ 5,100	$ 6,400
Accounts Receivable	36,000	29,000
Inventory	104,000	41,000
Prepaid Rent	1,081	1,081
Prepaid Insurance	375	358
Total Current Assets	$146,556	$77,839
Fixed Assets		
Workshop Equipment	21,600	18,000
Furniture	9,480	9,106
Vehicles–Trucks	51,680	6,000
Buildings–leasehold Improvements	4,600	
Vehicles–Cars	5,900	5,100
	$93,260	$38,206
Accumulated Depreciation	$ 3,273	$ 4,600
Net Fixed Assets	$89,987	$33,606
TOTAL ASSETS	$236,543	$111,445
LIABILITIES & EQUITY		
Liabilities		
Accounts Payable	$ 51,408	$ 23,980
Payroll Taxes Payable	600	480
Accrued Payroll	109	1,210
Deferred Revenue	225	608
Notes Payable	36,000	
Total Liabilities	$ 88,342	$ 26,278
Fund Balance at End of Year	$148,201	$ 85,167
TOTAL	$236,543	$111,445

EXHIBIT 6-12

NOVA Industries

Statement of support, revenue, expenses and changes in fund balances for the year ended December 31, 1978 with comparative totals for 1977

	General Fund	Property Fund		TOTAL	
		Unrestricted	Restricted	1978	1977
PUBLIC SUPPORT & REVENUE					
Public Support					
Contributions	$ 3,943			$ 3,943	$ 2,900
Title XX	83,313			83,313	31,400
Social Security	5,420			5,420	5,680
County Mill Levy	20,800			20,800	20,800
Revenue Sharing	3,108			3,108	900
United Way	600			600	1,900
V.R. Block Grant	11,910			11,910	12,108
Total Public Support	$129,094			$129,094	$ 75,688
REVENUE					
Interest Income	$ 900			$ 900	$ 820
Fees for Services	31,800			31,800	37,224
Sub Contract	10,801			10,801	11,100
Prime Manufacturing	3,900			3,900	4,200
Total Revenue	$ 47,401			$ 47,401	$ 53,344
Total Public Support & Revenue	$176,495			$176,495	$129,032
Functional Expenses	$113,461			$113,461	$ 97,465
Excess (Deficit) of Revenue over expenses	$ 63,034			$ 63,034	$ 31,567
Fund Balance at beginning of year	$ 85,167			$ 85,167	$ 53,600
Fund Balance at End of Year	$148,201			$148,201	$ 85,167

EXHIBIT 6-13

NOVA Industries

Comparative Statement of Functional Expenses for year ended December 31, 1978 with comparative totals for 1977.

Functional Expenses:	1978	1977
Staff salaries	$ 45,000	$ 43,000
Fringe benefits	6,750	6,450
Payroll taxes	450	430
Client Wages	5,060	5,800
Client payroll taxes	56	58
Contract services	180	210
In–service Training	3,480	390
Telephone	1,380	1,240
Insurance	4,500	4,300
Professional Memberships	390	390
Repairs and Maintenance	1,180	2,100
Supplies general	680	540
Supplies–work adjustment	2,300	780
Supplies–vocational evaluation	4,600	908
Supplies–production	4,600	3,840
Supplies–janitorial	390	383
Utilities	1,640	1,980
Recreation	410	608
Miscellaneous	29	46
Rent	12,980	12,980
Staff Recruitment	650	
Small Tools	360	
Postage	540	390
Printing	406	108
Accounting	800	600
Accreditation	1,240	
Consultants	3,109	1,006
Vehicle Operating Expenses	5,900	5,390
Educational Materials	600	430
Depreciation	3,401	2,708
Advertising	400	400
TOTAL	$113,461	$ 97,465

EXHIBIT 6-14

Givens - Question One

Ratio	Information
Inventory Turnover Ratio	1. Cost of goods = $19,800 2. Average inventory = $ 7,680
Receivables Turnover Ratio	1. Net sales on credit = $10,487 2. Average accounts receivable = $ 3,000
Payable Turnover Ratio	1. Average accounts payable for previous 12 mos. = $ 7,482 2. Total credit purchases for previous 12 mos. = $88,008
Benefit Cost Ratio	1. Annual average wages = $ 6,656 2. Average cost per client = $ 5,162
Current, Quick, & Cash Ratio	1. $36,000 bank note payable is due in full in 1978

Answers to Exercises

Ratio Analysis Composite Report

1a. Current Ratio: $\frac{\$146,556}{\$\ 88,342} = 1.66:1$

Discussion: There is severe slippage; cash on hand is declining, accounts receivables up. Too much inventory; check production and collections.

Trends: Down from 2.96 in 1977

Distribute to:
a. Board of Directors
b. Accountants
c. Funding Source
d. Creditors
e. CEO

b. Quick or Acid Test Ratio: $\frac{\$\ 41,100}{\$\ 88,342} = .47:1$

Discussion: We are in jeopardy of being unable to pay our debts; making payroll is questionable!

Trends: Down from 1.35 in 1977 which is not good.

Distribute to:
a. Board of Directors
b. Accountant
c. Funding Source
d. Creditors
e. CEO

c. Cash Ratio: $\frac{\$\ 5,100}{\$\ 88,342} = .06:1$

Discussion: We are becoming cash poor. Will more than likely have to begin borrowing just to meet payroll and bills which are due this month.

Trends: Down from .24 from 1977

Distribute to:
a. Board of Directors
b. Accountant
c. CEO

d. Fund Balance Ratio: $\frac{\$148,201}{\$236,543} = .63:1$

Discussion: We own 63 cents of every dollar in assets—well above minimum safe level.

Trends: Down from .76 in 1977

Distribute to:
a. Board of Directors
b. Accountant
c. Funding Source
d. Creditors
e. CEO

e. Indebtedness Ratio: $\frac{\$\ 88,342}{\$148,201} = .60:1$

Discussion: We are financing about 1/3 of our operation, thus we own well over 1/2 of what we have. The facility can probably arrange credit as needed.

Trends: Up from 37 last year—due to the $36,000 short term bank note.

Distribute to:
a. Board of Directors
b. Accountant
c. Creditors
d. CEO

f. Debt to Asset Ratio: $\frac{\$\ 88,342}{\$236,542} = .37:1$

Discussion: Slightly over 1/3 of our assets are financed by someone else; this presents no apparent problem.

Trends: Up from .27 in 77 - rather large jump—due to bank loan

Distribute to:
a. Board of Directors
b. Accountant
c. Creditors
d. CEO

g. Inventory Turnover Ratio: $\frac{\$19,800}{\$\ 7,680} = 2.58:1$

Discussion: Too much tied up in inventory which is not turning over quickly enough. It is effecting the liquidity of our assets; we probably will have spoilage of inventory. Average turnover time is 141.5 days.

Trends: Don't have figures from last year.

Distribute to:
a. Board of Directors
b. Production Coord.
c. CEO

h. Receivable Turnover Ratio: $\frac{\$\ 10,487}{\$\ 3,000} = 3.5:1$

Discussion: We need to evaluate collections—this must go up to 6.0. Current turnover time is 104 days.

Trends: No data from last period.

Distribute to:
a. Board of Directors
b. Accountant
c. Production Coord.
d. Rehab. Coord.
e. Funding Source
f. CEO

i. Payable Turnover Ratio: $\frac{\$\ 88,008}{\$\ 7,482} = 11.8:1$

Discussion: Excellent payable record. 31 day turnover time should optimize credit costs. We will however not continue if the current cash shortage is not corrected.

Trends: no data

Distribute to:
a. Board of Directors
b. Accountant
c. Creditors
d. CEO

j. Net Profit Ratio: $\frac{\$\ 63{,}034}{\$148{,}201} = .43{:}1$

Discussion: 43% profit in relation to the investment—exceptionally high.

Trends: no data on last period

Distribute to:
a. Board of Directors
b. Accountant
c. Production Coord.
d. Rehab. Coord.
e. Funding Source
f. Creditors
g. CEO

k. Return on Investment/ Total Assets Ratio: $\frac{\$\ 63{,}034}{\$236{,}543} = .27{:}1$

Discussion: Shows good stewardship—excellent return on the use of the assets held by the facility.

Trends: no data from last period

Distribute to:
a. Board of Directors
b. Accountant
c. Production Coord.
d. Rehab. Coord.
e. Funding Source
f. Creditors
g. CEO

l. Benefit Cost Ratio: $\frac{\$\ 6{,}656}{\$\ 5{,}162} = 1.29{:}1$

Discussion: Client benefits or social return to the economy remains high even using this ultraconservative measure.

Trends: no data from last period

Distribute to:
a. Board of Directors
b. Accountant
c. Production Coord.
d. Rehab. Coord.
e. Funding Source
f. Creditors
g. CEO

GENERAL COMMENTS ON FINANCIAL ANALYSIS FOR PERIOD

1. Inventory problems must be investigated NOW!
2. Collection from receivables must double in 30 days.
3. Finance Committee and Executive Committee need to develop plan to deal with short term liquidity problem—possibly extend current bank loan to three years rather than one.

2. "Rules of thumb" are predetermined standards reflecting a desired relationship. They are standards which hold up from industry to industry, and as such may have universal applicability. Goodwill Industries of America (GIA) has used such standards for the current ratio and the fund balance ratio for many years; their transferability to other facilities seems appropriate.

   Other ratios, however, have not been used in rehabilitation to the extent that dependable "rules of thumb" have been developed. The GIA rules should be considered as minimum safe levels of performance. Conclusions below the rule require prompt action and decision while ratios above the minimum safe level mean reasonable security. Remember that excessively high ratios can mean assets are not being appropriately utilized.

   (See pages 87; 96)

3. The best answer to this question is "with caution" for the time being, that is, until the field develops a sound research base for stating minimum safe levels. A facility gathering ratio data should concentrate on the valuable data presented by time series analysis and trend percentages. If these data are collected now, research in the future will be much easier. A study comparable to the Beaver, 1968 study of for-profit industries is needed for not-for-profit rehabilitation facilities.

   (See pages 87-88)

4. Provides clues and symptoms for underlying problems. They assess performance in several areas of financial operations. They are simple and easy to calculate. Utilizes areas of commonality to show relationships in fiscal matters. Ratio analysis allows large quantities of data such as total assets or total revenue and support, to be brought together and expressed in a single computation or relationship.

   (See pages 87-88)

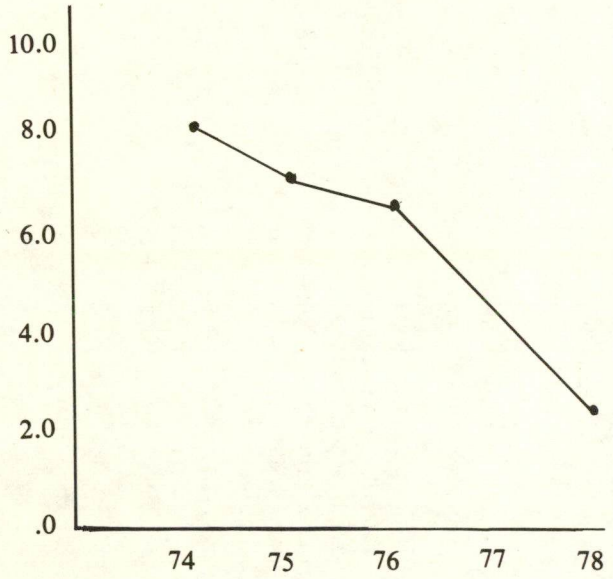
5. Bankruptcy is the legal term for a state of insolvency which has reached the stage of receivership, reorganization, or total collapse. Insolvency can go on for some limited time before bankruptcy occurs. Insolvency is the inability of an organization to pay its current debts.

   (See page 89)

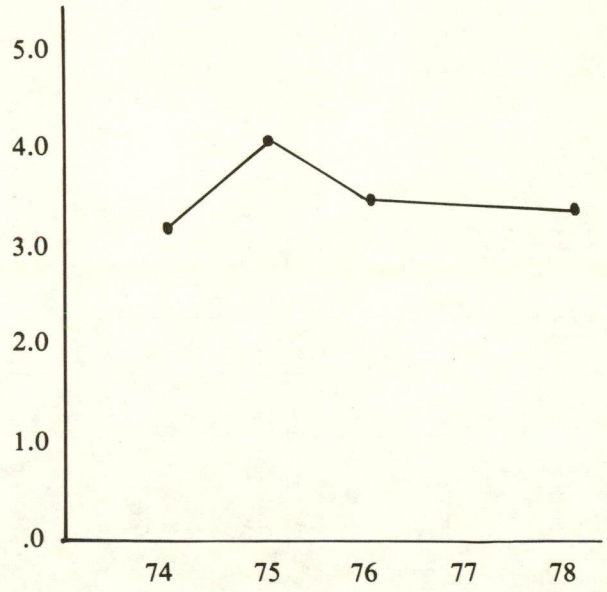
6. Graphs appear on following pages.

   (See pages 102-103)

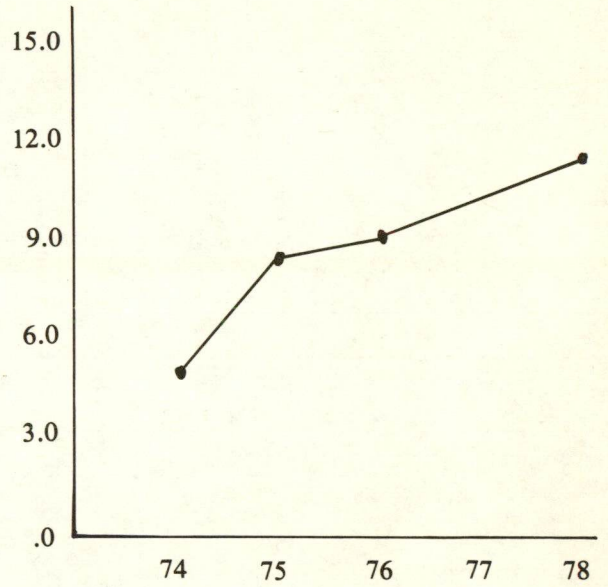
Inventory Turnover



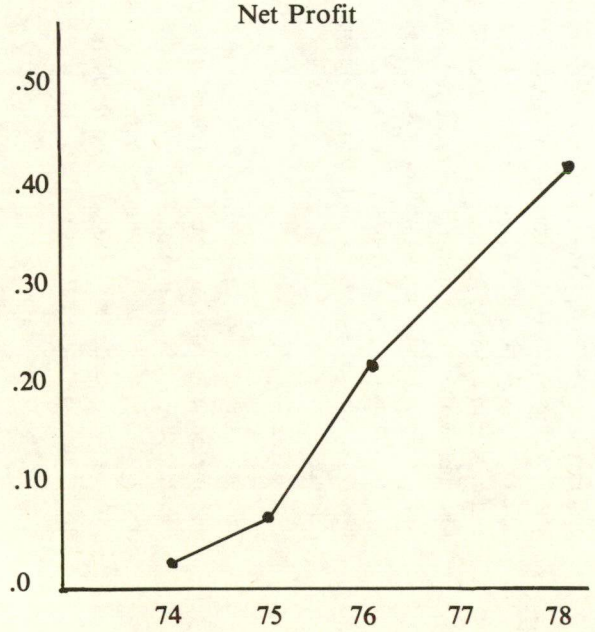
Receivable Turnover



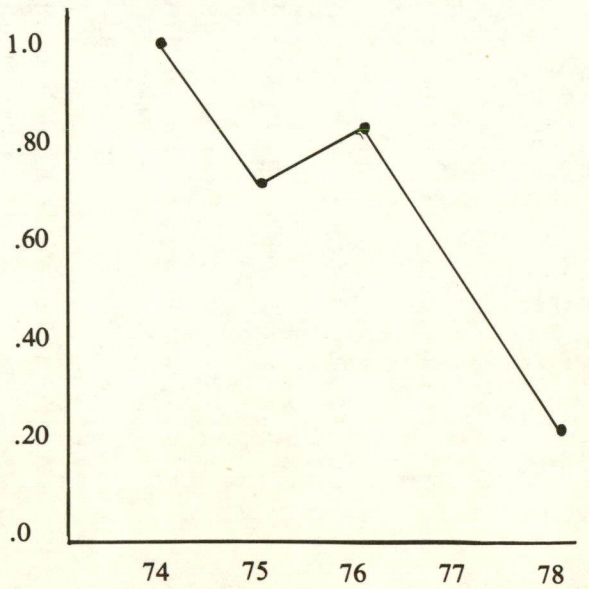
Payable Turnover



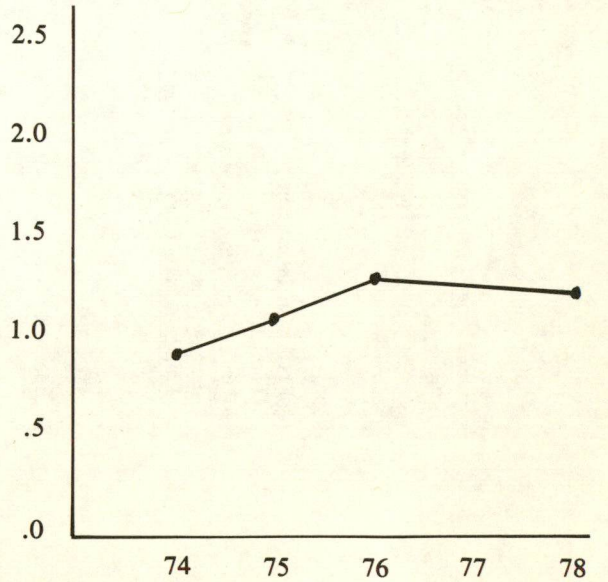
Net Profit



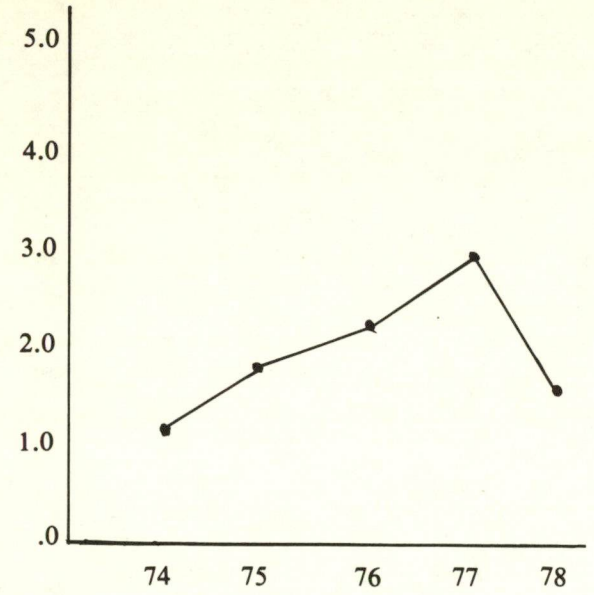
ROI



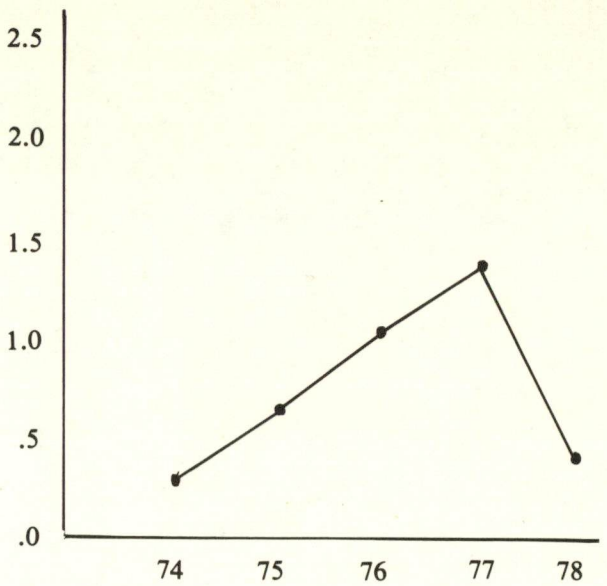
Benefit Cost



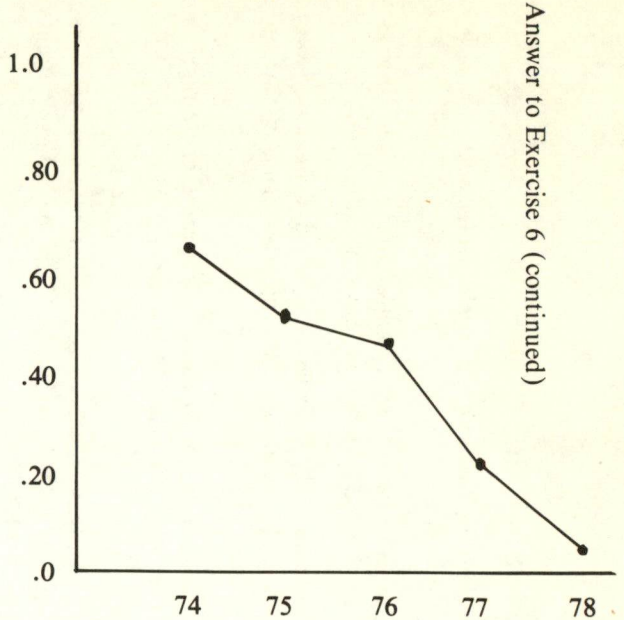
Current Ratio



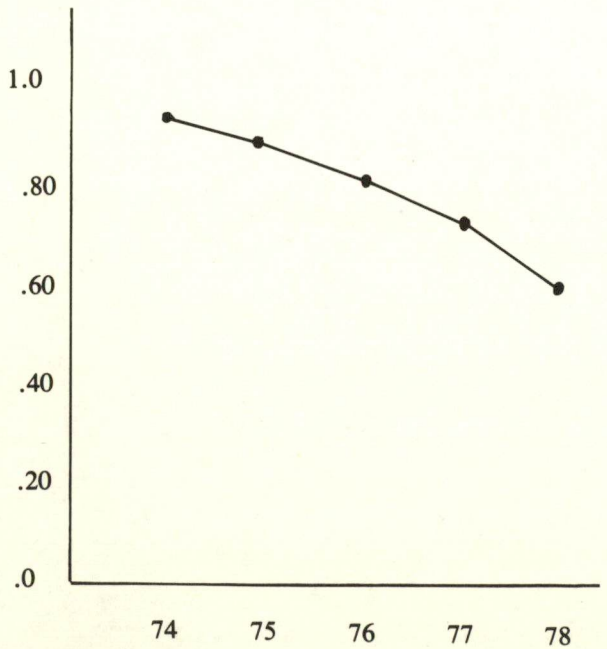
Acid Test Ratio



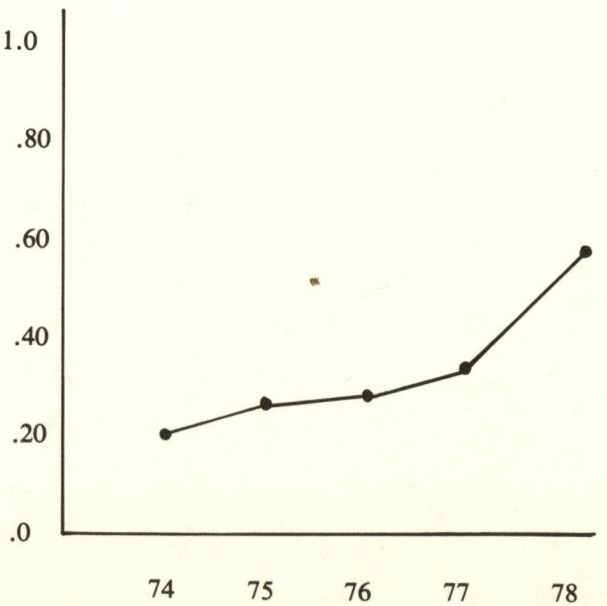
Cash Ratio



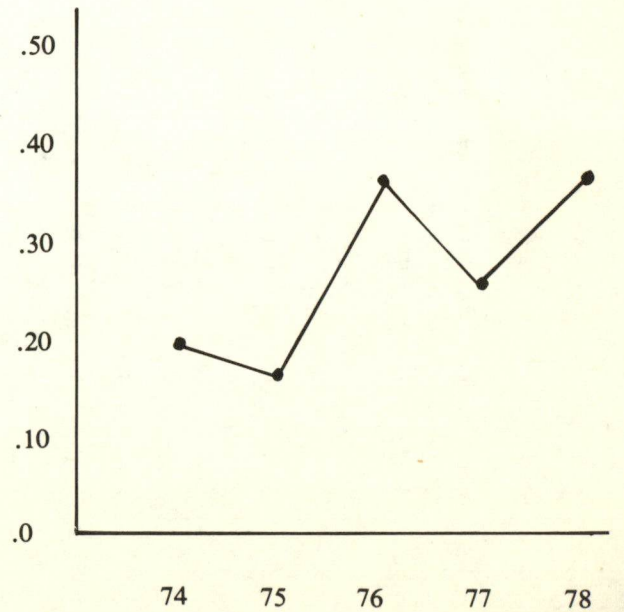
Fund Balance



Indeptedness



Debt to Asset



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Sprouse, R.T., & Swieringa, R.J. *Essentials of financial statement analysis.* Reading, Massachusetts: Addison-Wesley, 1972.

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Cross Reference with the Commission on Accreditation of Rehabilitation Facilities (CARF)

Fiscal Management Standards

Rehabilitation facility accreditation has been referred to as an issue, a hassle, as the most positive step ever in the facility movement, and perhaps a number of other ways. Regardless of one's attitude, facility accreditation is one of the major concerns confronting any facility director. For this reason, the fiscal management section of the *Standards manual for facilities serving people with disabilities* 1982 was cross referenced with *Selected aspects of financial management in rehabilitation facilities: A resource manual.* For simplicity, the fiscal management section of the standards manual (I.F.) was reproduced here in its entirety. The chapter and page from this manual which corresponds to each subsection of the standards manual was indicated in the column at the right. This should prove to be of assistance to the facility CEO & staff in preparation for CARF accreditation.

I. STANDARDS FOR THE ORGANIZATION

F. Fiscal Management

Principle

The facility should manage its fiscal affairs consistent with the purposes of the organization and in accordance with sound practices and legal requirements.

	Selected Aspects	
	Chapter	Page
1. Financial operations should conform to legal requirements and should be based upon sound financial planning and prudent management of capital, operating income, and expenditures. Fundamentally, the fiscal management of the rehabilitation facility does not differ greatly from that of any business organization. Basic requirements are:	1 2	1 to 2 11 to 12
a. Efficient and effective recording, reporting, and control of earnings, expenses, assets, and liabilities,	 3 6	25 to 29 32 to 36 88 to 93
b. Collection and reporting of statistical data,	1 6	3 101 to 105
c. Determination of costs of services and activities, some of which are unique to rehabilitation, and	4 5	50 to 51 72 to 74
d. Preparation of budgets.	4	51 to 59
2. The governing body should adopt an annual budget, establish policies for administration of funds, and regularly review the financial status of the facility. Fiscal data or reports should be prepared and communicated to the governing body or its designated authority at no less than quarterly intervals, or more frequently if needed.	4 3 6	43 to 51 25 to 29 101 to 103
3. The facility should operate on an annual budget. The budget should:	4	43 to 51
a. Reflect and anticipate the facility's needs and resources for realizing its goals,	4	43 to 45
b. Reflect input from professional and administrative staff concerning need and selection of equipment, modification of facilities used in the conduct of the program, and staffing requirements,	4	43 to 45
c. Be approved by the governing body or its designated authority prior to the initiation of the new fiscal year, and	4	43
d. Be used, during the year covered, as a yardstick to assess accomplishment of budgetary goals. The governing body should approve all major budgetary modifications to adapt to unanticipated factors. The governing body should also periodically compare the budget as formulated or revised with the actual income and expenditures as a means of measuring ongoing facility performance.	4	59 to 60
4. An examination of the facility's financial statements should be conducted annually by an independent public accountant, licensed and qualified to express an opinion on the fairness of presentation of the facility's financial statements. The result of the examination and any accompanying recommendations should be reviewed and acted upon by the governing body or its designated authority. To help assure impartiality, the accountant should not be on the staff or governing board of the facility. This standard is not applicable in the instance of a publicly operated facility or a rehabilitation unit of a larger entity. In these instances, the facility should adhere to requirements of the public agency or larger entity. In governmental facilities a unit of the government may conduct the audit, but in such instances the accountant should be administratively independent of the facility.	3	29 to 32

5. The facility should maintain fiscal records and reports, including payroll, purchasing, and financial statements of the facility. Publicly operated facilities and rehabilitation units of larger entities need not retain this information in the rehabilitation facility. Fiscal reports will require transmittal and presentation to various groups according to the nature and obligations of the facility. Examples are: the governing body, community fund budget review committees, professional organizations, and the general public. The frequency of such reports will vary according to the size and other characteristics of the facility, but should not be less than quarterly for the governing body nor annually for other groups. Reports should be presented in such a manner that they clearly and accurately reflect the operations which are being fiscally analyzed and do so in relation to the program's purposes.	5 6	68 to 69 76 to 80 101 to 105
6. The facility should have a cash management policy including but not limited to:	3	25 to 29 33 to 36
a. A policy for the investment of funds,	3	25 to 27 31
b. A mechanism to meet working capital and contingency needs, and		
c. A written system of cash control.	3	25 to 36
*7. The facility should maintain its financial solvency through such means as establishing and collecting fees and obtaining grants, donations, and endowments.	4	48
8. Charges for services or products should be based on a knowledge of their costs (both direct and indirect). An essential factor in maintaining financial solvency is the application of good cost accounting principles in determining charges, fees, or rates for services or products. The application of such principles requires a knowledge of all component costs of services or products in order to establish meaningful charges. The facility should identify its cost per service unit. The facility should identify other cost accounting needs and develop appropriate means of analysis and reports for each.	5	69 to 74 78 to 80
9. All long-term contracts and agreements to provide services should have an annual review to assure an adequate pricing structure.	NI	NI
10. Where fees for services are charged, the facility should have an established schedule of fees for services.	NI	NI
a. The schedule of fees should be available in printed form.	NI	NI
b. The schedule of fees should be applied fairly and equitably to each person served.	NI	NI
c. Fees should not be split with other agencies or individuals as consideration for referral of persons to be served.	NI	NI
11. A fiscal description of program activities should be prepared and communicated to the facility's public at least annually. This standard does not apply to a proprietary facility. A publicly operated facility or a rehabilitation unit of a larger entity should adhere to the policies and practices of the larger agency or entity.	6	101 to 105

12. The facility should have a risk protection program adequate to preserve its assets and to compensate its staff, volunteers, board members if applicable, those served, and the public for reasonable claims due to untoward events for which the facility is liable. Evaluation of the needs for insurance and the types of protection offered should be reviewed annually, or more frequently if necessary. Insurance or risk coverage should include building(s), equipment and inventory, workers' compensation, social security or an alternate program, and bonding of appropriate personnel. A publicly operated facility or a rehabilitation unit of a larger entity should follow the policies and practices of the larger agency or entity.	3	27 32 to 33 36
13. The facility should consider its needs and responsibilities in relation to malpractice liability insurance, product and service liability insurance, and directors' and officers' errors and omissions insurance.	3	33
14. The facility should provide for vehicle insurance coverage at a level appropriate to the purpose for which the vehicles are used. A publicly operated facility is exempt from this standard.	3	33
15. Facilities engaged in retail sales should meet the following standards:	NI	NI
a. The sales area should be functional in layout and appearance.	NI	NI
b. The merchandising system should provide for adequate levels of stock, stock controls, and stock rotation.	NI	NI
c. Where required by law, a retail sales permit or license should be obtained.	NI	NI
d. Facilities should establish sales goals and periodically review information regarding the extent to which these goals have been accomplished.	NI	NI
16. There should be an established procedure for providing acknowledgment and donation receipts for income tax purposes upon the receipt of any gift, donation, contribution, or bequest. A system should be in effect to assure the trust of the public by protecting against the misappropriation of contributed materials.	3	33 to 34
17. The facility should disclose to contributors its current exemption status with federal and state revenue agencies, i.e., public charity, private foundation, etc.	NI	NI
18. The facility should provide for identification and accountability of any facility expenditure of funds belonging to those served.	NI	NI
a. If paid staff members are allowed to serve as guardian, conservator, and/or representative payees for individuals served, a system of accountability for expenditure of the person's funds should be maintained.	NI	NI
b. When nonfee-for-service funds, such as maintenance or personal allowance monies, are received in behalf of the person served, or when the facility serves as representative payee, such funds should not be comingled with other funds, but should be segregated and used only for the purpose for which the funds were received.	NI	NI

NI=Not Included

Glossary

Accounting is the art of recording, classifying, and summarizing in a significant manner and in terms of money, transactions and events, which are, in part, of a financial character and interpreting the results thereof (AICPA, 1961, p. 9).

Assets are those items of value which the entity has in its possession.

Accrual Accounting is a form of accounting which records revenues when they become owed to the entity, expenses when they become owed by the facility, and attempts to match expenses with the revenues which they produced.

Audit is an objective investigation to validate the representations in the financial statements by obtaining reasonable assurance of the integrity and reliability of the underlying accounting system (Bittel, 1978).

Balance Sheet is a financial report of an entity which shows the total assets equal to the total liabilities plus equity. It is a statement of the entity's financial condition at a particular moment in time.

Benefit Cost is a ratio used by not-for-profit corporations to demonstrate the relationship between benefit (economic and social) and cost associated with a particular program.

Bookkeeping is the discipline of recording and classifying the financial transactions of the entity in a meaningful and useable manner.

Budgeting is the act of preparing the quantitative expression of the plan of action such that it summarizes the objectives of all subunits of an organization (Horngren, 1972, p. 12).

Chart of Accounts is a listing of all an organization's accounts which are used for classifying all transactions.

Contract Income is that revenue produced by the satisfactory completion of subcontracts held by a rehabilitation facility.

Controller/Comptroller is the chief or immediate subordinate financial management officer of an organization, usually an accountant by preparation, who is responsible for all or a major portion of the financial management functions of the organization.

Cost Accounting, frequently referred to as management accounting, is an accounting service function which establishes cost control or responsibility centers in the organization, and records revenues and expenses according to those centers. Such accounting frequently requires the conduct of routine or special studies to answer management questions relative to costs and prices.

Credit is the extention or possession of an asset on the basis of a promise to pay under certain terms and conditions. It is also the entry made to the right side of the account in double entry bookkeeping.

Credit Management is the planning, organizing, directing and controlling of credit extended by an organization.

Debit is the entry made to the left side of the account in double entry bookkeeping.

Deferred Liability is a revenue which has an inherent liability to produce a specified good or service at some future time.

Entity, from an accounting point of view, is that basic enterprise about which we are trying to report—it has some form of legal existence and capable of engaging in a variety of legal and economic transactions.

Expenses are costs incurred by an entity as a part of its operation.

External Controls are those resources external to the organization which are used to safeguard the assets of the organization and which are generally used to augment the internal controls and detect collusion or opportunities for same.

Financial Accounting is that accounting which is performed by the facility to record and report material financial transactions in a manner which provides for meaningful public disclosure of the financial condition of the facility.

Financial Management is the planning, organizing, directing and controlling of the economic affairs of the entity.

Fixed Assets are those assets which are likely to be held for periods in excess of one year for the purpose of conducting the operations of the entity and usually include such items as land, building, and equipment.

Function is a major purpose, service, or need to be accomplished by an entity which can be used to classify and record expenses and revenues.

Fund is a group of assets which constitute an independent accounting entity, which is established and maintained for a specific purpose (Goodwill Industries of America, not dated).

General Fund is that fund which is used for day-to-day operations, which usually has the fewest restrictions placed on its utilization (generally only that the assets be used for the broad purpose for which the entity was established).

Internal Controls are a system of procedures and cross checks which in the absence of collusion minimize the likelihood of misappropriation of assets or misstatement of the accounts and maximize the likelihood of detection if it occurs (Gross & Warshauer, 1979, p. 358).

Inventory are those groups of assets either fixed or current which are used for the generation of revenue.

Invoice is the document from the vendor which provides detailed information concerning the good or service provided, the vender, and the terms of payment.

Insolvency is the inability of the entity to meet its obligations from its assets.

Joint Costs are costs which are direct in nature but intimately associated with the production of more than one good or service.

Journal is a chronological listing of all financial transactions of the organization which includes the accounts and amounts to be debited and credited.

Ledger is a record of all of the accounts of the facility and reflects the entries posted from the journal by account.

Leverage is the relative degree to which the owners or creditors have financed the firm's investments (Bittel, 1978). A measure of related ownership or the extent of creditor impact on the ownership of the entity.

Liabilities are those legal obligations which an entity has to pay.

Liquid Assets are those assets which are readily convertable to cash.

Liquidity is a concept related to the ability of an entity to meet its current obligations with liquid assets.

MIS is an abbreviation for "management information system" or that system which is designed to provide data in a meaningful fashion to management which is necessary for the successful operation of the entity.

Object is the nature of an expense or revenue. Object of expense could include salaries, wages, travel, commodities, contractual services; object of revenues could include fees for service, grant revenue, specified donations.

Payables are amounts legally owed to specific entities with related conditions.

Program Planning is the thoughtful and rational consideration of objectives and alternative means to achieve those objectives (Moore, 1970, p. 39).

Proprietary Operation an operation owned by an individual or partnership for the purpose of generating a profit for the benefit of the owners.

Purchase Order a document in the purchasing system which officially orders the good or service and establishes a legal obligation to pay for same if the specified standards are met.

Purchase Requisition a document in the purchasing system which recognizes a need for a good or service and conveys that need to the proper authority.

Quick Assets are all assets which are cash, or convertible to cash, at will.

Ratio is a relationship between two numbers usually representing two values for which there should be some relationship.

Receipts are those documents which record and verify revenues which are actually received and from whom.

Receivables are amounts legally owed to the entity by specific creditors.

Receiving Report is a document in the purchasing system which verifies the actual receipt of the good or service by the entity.

Revenues are income generated by the facility as a part of its operations.

Risk Management is the planning, organizing, directing and controlling of the insurance designed to replace assets, or provide some degree of compensation for assets which are lost to the entity based on a variety of environmental considerations.

Risk Protection is the provision of insurance commensurate with the probability of loss and the value of the asset in question.

Solvency is the ability of an entity to meet its obligations (liabilities) from its assets.

Voucher is a document in the purchasing system which documents that all requirements for payment have been met, and authorizes payment of the payable.

Voucher Register is a special subjournal which records all approved vouchers and is a necessary recording step prior to placing the voucher in the unpaid voucher file.

Zero Based Budgeting is an approach to planning and budgeting which assumes that all functions of an organization compete for available resources and provides a vehicle for deciding on what decision package to fund (Pyhrr, 1970).

Annotated Bibliography of Suggested Readings

Abeh, R. The role of cost and cash accounting in price determination. *Management Accounting (N.A.A.)*, April 1978, 59(10), 29-32. Cost allocations are becoming more and more important in current accounting practices. Article discusses the relevance of costs and the question of full cost determination. *Key words:* cost analysis, accounting, allocation, cost determination.

Abrams, R.W. How to diagnose, and help cure, a case of insolvency. *Practical Accountant,* January/February 1979, 12(1), 65-69. Provides the reader with very simple, clear cut, techniques in the diagnosis, remediation, and assistance of an entity faced with insolvency. Indicates internal and external symptoms, possible remedies and the role of the adult. *Key words:* insolvency, assets, receivables, inventory, accountant, auditor, audit report, symptoms.

American Institute of Certified Public Accountants. *Audits of voluntary health and welfare organizations.* New York: Author, 1967. An audit guide prepared to assist independent auditor in examination of the target organizations. It discusses appropriate reporting practices in various circumstances. Each chapter presents the auditing procedures for the *key words:* current restricted funds, interfund indebtedness, fixed assets, and depreciation, investments, donations (cash and other), membership, expenditures from unrestricted funds, and associated organizations. Additional areas of coverage are: reporting standards, fund accounting and illustrations of functional classifications.

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Goodwill Industries of America, Inc. *Budgeting and planning seminar.* Washington, D.C.: Author, date unknown. A training package which deals with accounting techniques and planning considerations. Intended to assist in establishing or enhancing a budget system by providing educational aids and forms to be used. Presents budgeting as a system, as a management function and a process with goals and objectives. *Key words:* budgeting, planning, projecting, variances, budget controls, budgeting expenses, formulating assumptions.

Goodwill Industries of America, Inc. *Financial management seminar.* Washington, D.C.: Author, date unknown. Workbook designed as instructional technique for short term training of facility administrators and financial officers.

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Gross, M.J., & Warshauer, W. *Financial and accounting guide for nonprofit organizations.* New York: John Wiley and Sons, 1979. A major objective of this book was to help the administrator of a non-profit organization better communicate its financial activities and financial condition to its members and to the public. The author presents clean illustrations and key concepts in order that the chief executive officer and the financial operations committee of the board of directors can better understand the periodic financial report and make informed decisions. A comprehensive summary of current accounting practices and alternatives accounting/reporting methods are presented and ranked according to degree of acceptability. The publication was planned as a guide to accounting and reporting principles. *Key words:* financial concepts, financial statement presentation, accounting and reporting guidelines, controlling the nonprofit organization, and compliance reporting, and setting up and keeping books.

Hampton, J.J. *Handbook for financial decision makers.* Preston, Virginia: Preston, 1979. Serves as a dictionary, encyclopedia and cookbook for the field of corporate finance. A "no nonsense" approach with cross referencing. Bridges the gap between the sophisticated financial manager and the executive who has only a working knowledge of, and responsibility for, financial organization. *Key words:* capitol, profit, mergers, budgeting, financing.

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Horngren, C.T. *Introduction to management accounting* (4th ed.). Englewood Cliffs, New Jersey: Prentice-Hall, 1978. Primarily for students who have had one or two courses in accounting. Provides more attention to not-for-profit organizations than previous editions. Uses a general approach where the fundamental accounting concepts and techniques for planning and control are applicable to all types and functions of organization, not just to manufacturing. *Key words:* problem solving, accounting, variable/fixed costs, classification of costs, income statements, balance sheets, pricing, budget, financial planning, variances, cost allocation, cash flow, overhead application, inventory planning, nonprofit, annual reports.

Houston, W.S. *The separation of rehabilitation from production costs in the vocational rehabilitation workshop.* Unpublished doctoral dissertation, North Texas State University, 1972. Approaches the problem of developing an accepted procedure for separating the joint cost involved with providing rehabilitation services within a sheltered production setting. These joint costs are described as (1) rehabilitation or training costs and (2) production costs. Analyzes the objectives of the vocational rehabilitation workshop that would indicate separation of costs and presents a procedure for effecting the separation. *Key words:* definition, history of rehabilitation, joint cost, allocation, production, reimbursement.

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Kellog, I. *How to use financial statements: A handbook for lawyers.* New York: McGraw Hill, 1969. Provides an understanding of procedures and techniques in dealing with operating statements. Conceived as an aid to attorneys in the daily practice of law. Presents statements as techniques not traps. Provides an analysis of all parts of the organizational financial statement as well as pointing out sources of potential manipulation. *Key words:* audit, cash, accounts receivable, inventories, prepaid expenses, fixed, assets, accounts payable, current and long term liabilities, equity, revenue, cost of goods sold.

Lohman, R.A. *Breaking even: Financial management in human service organizations.* Philadelphia: Temple University Press, 1980. An attempt at a synthesis of knowledge about financial management as it relates to the human service manager who is faced with decisions concerning budgets, accounting data, fund raising, financial planning, and fiscal control. It is intended to serve four audiences; students, novice administrators, experienced administrators, and researchers. It is packaged as a "state of the art" and as a tool for establishing priorities for future effort. *Key words:* theory, accounting, grants, fees and client changes, fund raising, budgets, fiscal control, financial planning, evaluator.

Moore, R.F. (Ed.) *AMA management handbook.* New York: American Management Association, 1970. Encapsulates the policies and procedures favored by successful organizations in a wide range of business and industry. A practical aid to the application of present-day management theory in areas that perhaps are less than familiar to the reader. A body of factual information constituting a solid foundation for management. *Key words:* personnel, finance, marketing, manufacturing, risk, purchasing.

Pyhrr, P.A. Zero based budgeting. *Harvard Business Review,* November-December 1970, 48(6), 111-114. Presents the methods for doing zero based budgeting, gives examples, and then discusses the pros and cons for using this approach to budgeting. *Key words:* budgeting, decision making, resource allocation, management communications.

Tamari, M. *Financial ratios: Analysis and prediction.* London: Paul Elek, 1978. A document intended to describe the various uses which may be made of financial ratios as an analytical tool. The text focuses on the financial statement of an organization and the most efficient use of these statements. The problems associated with use of ratios is clearly covered as well as the careful scrutiny of bankruptcy indications. Ratios are seen as indicators of risk for the management analyst. *Key words:* financial statements, liquidity ratios, leverage ratios, performance ratios, management use of ratios, forecasting bankruptcy, indicators of risk.

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text which prepares the reader to examine, comprehend and analyze financial statements. *Key words:* record keeping cycle, financial statements, receivables, inventories, assets, expenses, liabilities, equity, interpretation of financial statements.

United Way of America. *Accounting and financial reporting: A guide for United Way and not-for-profit human service organizations.* Alexandria, Virginia: Author, 1974. A guide for meeting the needs of accountability and proper reporting to consumers, government and others. An approach to managing, directing, financing, interpreting, and evaluating the accounting and financial report procedures of an agency. An attempt to bring a series of diverse methods together. *Key words:* general principles, practices, standards and concepts of accounting, principles of reporting, recording transactions, preparing reports, exhibits of statements, examples, charts of accounts.

United Way of America. *Budgeting: A guide for United Ways and not-for-profit human service organizations.* Alexandria, Virginia: Author, 1975. Addressed to all human service organizations with principles and practices that are applicable to relationships between any service delivery agency and any funding source. The perspective is from the standpoint of the management team that looks ahead to its fiscal needs and presents such needs to a funding body clearly and simply. The book presents the techniques of budgeting, the process and tools for determining the dollar requirement for doing those tasks that a human service agency must do. *Key words:* Introduction to budgeting, planning, estimating, balancing the budget, surpluses and deficits, the tools, forms, worksheets and schedules.

Vichas, R.P. *Handbook of financial mathematics formulas and tables.* Englewood Cliffs, New Jersey: Prentice Hall, 1979. Selected formulas, tested mathematical short cuts, and frequently used tables considered essential to daily operations of any business, large or small, including non-profits. Pinpoints practical principles of sound financial management. *Key words:* interest, cash flow, ROI, financing, leverage, depreciation, leasing, inventory, liquidity, ratios.

Warshauer, W., & Meyerson, J.W. Operating reserves: Financial security in troubled times. *Association Management,* 1980, 32(9), 69-73. Discusses the survival of the non-profit organization in relation to maintaining a balance between operating income and expenses. Provides a viewpoint of potential operating deficits and the assistance that an adequate level of operating reserves can give. Operating reserves are presented as effective means of surviving economic uncertainty and enhancing financial and program flexibility. *Key words:* cash reserves, expenditures, size of reserves, assets, liabilities, equity, income statement.

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Westwick, C.A. *How to use management ratios.* New York: John Wiley, 1973. A broad and experientially based text on the use of financial ratios. The objective is to help directors and managers run their organizations more profitably and effectively. It describes what information executives should have, where and how to get it, and how to interpret it once it has been obtained. Presents ratio analysis as having 3 main uses: (1) diagnosis, (2) monitoring and (3) planning. *Key words:* principles of ratio selection, priority ratios for the chief executive, ratio calculation, the key ratio, subsidiary ratios, maintaining liquidity.