
Investment Decision Making in the Health Care Industry: The Future

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The economic and political environment in which providers of health care will operate during the 1980s will continue to be increasingly restrictive. Any private-sector organization's long-run survival depends directly on the quality of its investment decisions, broadly defined. This decision making will require three major innovations if private-sector health care providers are to survive: 1) traditional biases about the economics of not-for-profit entities must be abandoned; 2) standard data, procedures, and personnel from the accounting discipline must be supplemented with information, methodologies, and people from the discipline of corporate finance; and 3) economic and fiscal risk must be measured and incorporated into both investment decisions and interactions with external regulators. Practitioners can begin to implement these innovations immediately. Although substantial literature exists developing all these concepts generally and applying them to for-profit settings, the literature purporting to treat investment decision making for private-sector health care providers is, on average, replete with conceptual error, simplistic thinking, erroneous applications, and out-of-date methodologies. The literature is, in a word, horrid. Authors, both practitioner and academic, should stop writing terrible books and booklike periodicals for easy royalty dollars, and, instead, pursue sound applied research and disseminate their results in classrooms and in refereed journals.

THIS paper explores several aspects of the future of institutional-level investment decision making in the United States health care industry. More specifically, the paper discusses various factors affecting decisions made by health care provider organizations regarding the acquisition and divestment of real and financial assets as well as the initiation and termination of service programs. Section I of the paper presents some guesses about the nature of the health care industry of the 1980s. These guesses provide the broad frame-

work within which the remaining sections of the paper are structured. Section II further defines the limits of the paper, offers various definitions of terms, and identifies three areas of concern that I believe will determine the directions in which the industry will move in the next dozen years. The paper then examines each of these areas of concern in some detail in its relation to investment decision making. Some conclusions are drawn in each section; these are brought together in a summary at the end of the paper.

This research was supported in part by the W.K. Kellogg Foundation and the Association of University Programs in Health Administration (AUPHA). Comments by J. Gaylord Cummins, J.B. Silvers, and Susan Krinsky were very helpful. An earlier version of this paper was presented at the AUPHA's Financial Management Institute in Cincinnati, OH, on November 8, 1978.

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I. The Future: 1979–1990

The intent of this paper as a “futures-oriented” study is to recommend directions for the evolution of the health care industry with respect to investment decision making. Thus, in large part, the paper is written from a normative rather than a predictive point of view; it suggests how certain things ought to be approached, rather than speculating about how they will be accomplished. It is my hope, of course, that the latter will approximate the former.

The normative prescriptions I advance are made in the context of my best judgments about the economic and political environment in which the health care industry will operate in the 1980s.

My view of that environment is neither startling nor dramatic. I believe the 1980s will differ from the 1970s only in degree and will be characterized by the continuation of currently discernable trends. Between 1979 and 1990, the health care industry, in one form or another, will have survived: 1) continuing differential price increases relative to the rest of the economy (inflation); 2) two or more general recessions; 3) no respite from medical technology developing apace; 4) the gradual shift in the nature of health services to activities more preventive, primary, ambulatory, and residential; 5) a reduction of acute-care bed need resulting from both declining admission rates and shortened lengths of stay;¹ 6) the trauma of having to reallocate resources within the industry to meet major demographic changes, e.g., an aging population; 7) the experience of growing to command at least 12 percent of the total Gross National Product in real terms (say, in 1979 dollars); 8) the significant expansion of the investor-owned segment of the in-

dustry through both direct ownership of facilities and management contracts; 9) the reimposition of wage and price controls for up to two years at least twice prior to 1990; 10) the increasing adoption of prepayment and prospective reimbursement mechanisms, as well as formal, state-level rate setting and/or rate review; 11) the full implementation of Public Law (P.L.) 93–641 and, by the late 1980s, the probable replacement of that legislation; 12) the emergence of increased economic literacy in legislatures, regulatory agencies, and the courts; 13) some kind of federal legislation labeled “National Health Insurance;” 14) a substantial amount of media coverage, some of which will be complimentary; and 15) any number of mentions, mostly negative, in speeches made by politicians seeking reelection.

It is within the environment I have just described that organizational fiscal decisions, including investment decisions, will be made. These decisions can be made well or poorly, and while it is my intent to offer advice that will increase the likelihood that these decisions will be made well, I harbor no illusions that the proposals set forth here will be implemented in their entirety.

II. Objectives, Definitions of Terms, and Areas of Concern

Of the many concepts arising from economics, the notion of investment is generally well understood. Whether at the aggregate level of the Gross National Product, or at the level of the individual corporate organization, macro- and microeconomics have long since settled on “received” theories of investment. The discipline of corporate finance (which applies the principles of microeconomics to the business firm) no longer debates the fiscal pro-

cess through which many investment decisions must be analyzed. The process is well-specified for any investment proposal that, if adopted, would alter neither the overall business risk nor the overall financial risk of the organization accepting the proposal. That is, when the risk of the investment proposal is equal to that of the firm considering it, the fiscal evaluation process is wholly defined (see, for example, Boudreaux and Long [1, Chapter 13]). Further, in the 1970s, major advances have been made in formulating approaches to valuing investment proposals which would alter the risk of the adopting organization, and it is not unreasonable to suppose that some resolution of this debate will occur in the 1980s.²

The noneconomic dimensions of the investment decision are harder to analyze in formal, numerical ways. Nonetheless, American industry seems somehow to muddle through largely nonquantifiable political, competitive, and regulatory jungles at least as complex as those found in the health care industry. Investment decisions with solid economic content are made and implemented, and there is a substantial literature that examines these "imperfections" in the pure economic models. (See, for example, any issue of *The Bell Journal of Economics and Management Science*.)

This paper will not attempt to reinvent wheels currently in use in American business generally; what it will do is emphasize the fact that, with minor adaptation, these wheels can fit the health care industry and should be made to do so.

Before proceeding further, I feel that it is important to establish what I mean by the "investment decision" and the "health care industry." The term "investment decision" is generally understood to refer to the acquisition of

assets. Often, the decision-making process used by management for such acquisitions is referred to as "capital budgeting." Although most academicians and practitioners understand the meaning of "capital budgeting," the term is an unfortunate pairing of words in that 1) the acquisition of assets is only tenuously connected with the concept of capital, and 2) there is little relationship between such decisions and operational budgetary processes.³ Consequently, I avoid using the term.

There is also a potential difficulty with the term "investment decision" in that it tends to be used to refer only to the acquisition of assets. This is, of course, only part of the territory under consideration. The divestment of assets is a category of management decision making at least equally important. Many United States industries devote significant energies to analyzing "abandonment decisions," and even government has begun to do so with zero-based budgeting. Regrettably, the divestment decision is given short shrift by both academicians and practitioners in the health field; this may, in part, account for the existence of the "appropriateness review" mandated by P.L. 93-641.

Further, the investment decision is not limited to decisions that would alter the composition of real and financial assets appearing on a balance sheet. The initiation and termination of service programs are also decisions belonging to this class of analysis. Other types of investment decisions are, for example, the addition or deletion of some particular physician specialist, the use or nonuse of disposable supplies, and choices between in-house support activities versus outside contract alternatives.

The "investment decision," then, is properly defined as the process by which management makes decisions

that alter expected future operating cash flows through the addition and deletion of programs, personnel, and/or assets, real and financial.

It is also helpful to specify as to what the investment decision is not. For example, it involves neither the selection of sources of financing for assets acquired nor the uses of the proceeds from the liquidation of assets. It does not concern itself with the question of capital structure. While decisions made with regard to investment and financing are often concomitant, and are frequently contractually linked through requirements for collateral, the decisions are conceptually and pragmatically separate, and should not be commingled under any circumstances. For a careful discussion of this point, see Boudreaux and Long [1, Chapter 13, especially pp. 307–8 and 310–11]. Typical of the incorrect commingling of financing and investment decisions are attempts to compare directly the leasing of a piece of equipment (a financing decision) with the purchase of that equipment (an investment decision).

We usually think of the “health care industry” as comprising all those programs and institutions which engage in the delivery of health and health-related services. Each such component of the industry may be characterized as belonging to one of the three major organizational categories: the public sector, the not-for-profit private sector, and the investor-owned private sector. This paper will not attempt to deal with investment decision making in the public sector. A well-developed theory of public goods exists and is applicable to public-sector health care.⁴ Public-sector investments do have relevance to private-sector organizations with service areas or markets overlapping those of the public-sector activity. Indeed, public-sector competition with private capital is often a genuine problem.⁵

This paper, however, addresses the investment decision only from the perspective of the private sector.

I have identified three major areas of concern, the responses to which are of critical importance to the making of high quality investment decisions in individual private-sector health care institutions and programs. These concerns deal with 1) economic criteria for decision making, 2) the quality of the input of the decision-making process, and 3) the incorporation of risk measurement into both the decision criteria and the information on which decisions are based. Each of these areas has both conceptual and pragmatic dimensions that must be addressed not only by industry managers, but by appropriate trade and professional associations, academicians, legislators, and regulators. My working hypothesis for each of these areas of concern follows.

1. Among private-sector health care providers, there is no significant economic or philosophical difference between not-for-profit and investor-owned organizations. Not-for-profit providers, in particular, must be prepared to accept the preservation of private-sector capital as a corporate objective, and must learn to deal with economic “externalities” in ways that are dramatically different from the manner in which such phenomena are treated in the public sector. Private-sector providers need to comprehend how central the investment decision is to the preservation of capital, especially in an environment of increasing competition and regulation where preservation of capital is equivalent to corporate survival. During the 1980s, the socially efficient net investment in the health care industry as a whole and in institutional care in particular may well be negative. If this is so, then it is clear that all existing private-sector

providers cannot be successful in preserving their capital—in surviving. The survivors in 1990 will necessarily be those providers that best understand today the economics of the investment decision.

2. It is especially critical that management understand the types of organizational structure, personnel expertise, and information that are requisite to the investment decision. In general, the existing accounting systems were not designed to provide relevant information for investment decisions, and do not—usually cannot—generate such information. Estimating detailed prospective cash flow information and ascertaining meaningful required rates of return are essential tasks requiring professional expertise and organizational structure of better quality than what is currently in place in most provider institutions. The ability to incorporate the concepts and tools of finance (designed for futures-oriented decision making) side by side with the already existing concepts and tools of accounting (oriented to reporting past events) is a major challenge to the industry.

3. Managers in the health care industry also need to learn a great deal more than they now know about risk in a finance context.⁶ This includes 1) applying techniques of estimation and measurement of risk (e.g., being able to compare the risk of an investment proposal to that of the corporation considering the proposal), 2) explicitly incorporating risk measurements into the investment decision-making process, and 3) being able to use fiscal risk measurements for political/regulatory/competitive purposes. Using concepts of risk to the corporation's advantage (e.g., rate review hearings), in addition to working to minimize fiscal risk through noninsurance mechanisms such as certificate of need hearings, is

the next important step beyond the skill health care industry management has already developed in its continuing struggle to maximize reimbursement. The broadening and strengthening of such skills through an understanding of investment-proposal risk is the third major direction in which the industry should move in the 1980s.

In the sections that follow, this paper will explore each of these collections of issues and consider the steps that need to be taken in each area to improve the quality of investment decision making in the private-sector health care industry. The value judgment from which all of this discussion derives is that the continued existence of a significant private-sector health care delivery system in the United States is desirable.

III. The Homogeneous Private Sector

Much of the existing literature on the subjects not only of the investment decision but also many aspects of management treats the private, voluntary, not-for-profit sector of the health care industry as a wholly unique collection of organizations and programs which requires approaches to managerial decision making entirely different from those used elsewhere in the health industry or in other industries. At worst, parallels are drawn between the private, voluntary, not-for-profit sector and the public sector.

This idea that not-for-profit institutions must be dealt with as a separate class arises from observable special characteristics of the business of providing health care. It is erroneously concluded from this observation, however, that health care management must behave differently from other management in all respects. Historically, this view has been perpetuated by many of

our accredited master's degree health management programs, and has certainly become a self-perpetuated image within the industry itself. And, of course, highlighting the "differentness" has not been without benefit in courting political and philanthropic favor. Today, however, such favorable responses to the "unique" industry are waning. Further, even if the industry image of "differentness" persists in public, continuation of management decision making on this basis could be economically disastrous in the current environment. Every industry can find many unique things about itself; in general, such characteristics have little effect on the principles underlying managerial decision making. The health care industry is no exception.

And, the prestige and "special privilege" that historically have accompanied the status of being "different" continue to be more important in the minds of many practitioners, academicians, and industry representatives than are the prospective consequences of leaving the economic mainstream. A typical example of this mentality is the American Hospital Association's most recent *Financial Requirements of Health Care Institutions and Services* [14]. The general tone of this 1977 document (as amended February 7, 1979) emphasizes "special" characteristics of the health care delivery system, and then proceeds to list financial requirements in terms of these characteristics. In this statement, the AHA manages to inflict tremendous philosophic, economic, and, especially, political damage on the industry on three specific counts. First, the statement groups not-for-profit institutions with public institutions rather than with investor-owned institutions, striking at the very heart of the concept of a private sector (albeit not-for-profit) role in our society. The second major blow

is the statement's implication by omission that non-investor-owned institutions should not receive a reasonable return on their nondebt capital (equity). This is an open invitation to economic disaster (and/or public-sector takeover) for not-for-profit private-sector providers. The third damaging element in this document is the misguided notion that financial requirements can (or should) be defined in terms of needs for particular assets rather than in terms of preserving capital.⁷ Along with its continued advocacy of fund accounting, the AHA's statement has long-run negative implications for the industry that I find frightening to contemplate. When the not-for-profit hospital industry's own advocates maintain these Neanderthal perspectives, they create, in effect, an industry image that cries out for regulatory intervention and control.

Relatively recent writings on "capital budgeting" and "cost-benefit analysis" are also disturbing. Wacht [15], Bash [16], and Knobel and Longest [17] all advocate, in one form or another, the consideration of external (societal) benefits (and costs) for investment decision-making purposes, regardless of whether the decision-making organization receives any cash flows in recognition of the value of those "externalities."⁸

The advocacy of these authors seems to rely, in part, on simply ignoring the absence of internal compensation for external benefits. From reading this literature including Wittrup [19], I conclude that its authors really do believe that not-for-profit private-sector providers of health services should make decisions as though they were members of the public sector because, corporate charter aside, they really are public sector organizations.

Even Klarman [13] abets this mythology. While he is very careful to limit the applicability of global cost-benefit analysis to public-sector program evalua-

tion, he uses as one of his examples "the hospital," implying by default that all hospitals should behave as though they were public-sector organizations. Wacht [20, p. 67] and Wacht and Whitford [21, p. 40] perpetuate the notion that the investment decision making of hospitals should consider costs and benefits external to the decision-making organization, i.e., decision-making consequences not reflected in organizational cash flows.

The consideration of such externalities is, in general, appropriate to the public sector and is explicitly considered in the theory of public goods. It is, however, inappropriate as a basis for decision making in the private sector, and most health care providers, including hospitals, are private-sector organizations. Quantification of such externalities in dollar terms is, of course, important and desirable, especially if it can be used by the private-sector organization in the interaction between the organization and the public sector to obtain subsidies in recognition of external benefits. But there are no circumstances in which an investment proposal having a negative net present value (NPV) on an internal cash flow basis should be adopted by the organization simply because external economic benefits are expected. The proposal should be adopted only if, through some public-sector process, the value of those external benefits can be returned in the form of cash to the investing institution and the added value produces a positive NPV.

Berman and Weeks [22, pp. 517–528] recognize the NPV implications of external benefits, but they advocate the calculation of a benefit index. Their prescription is to consider both the NPV and the benefit index in investment decision making. Hence, they advocate the adoption of certain projects with negative NPVs. Their argument for

this economically irrational position [22, p. 525] seems to be that 1) hospitals are different, 2) cost-based reimbursement makes everything very complicated, and 3) every individual organization has to structure its own decision rules. Herkimer [23, pp. 257–266] also uses an index approach ("weighted scale of benefit values," in his terminology) which he attempts to integrate with NPV analysis (of costs only). He presents no final decision rule; this makes definitive evaluation of his approach difficult beyond the observation that cash inflows to the institution are ignored in his primary example (cash inflows do appear in a later part of the chapter). Nackel and Westbury [24] advocate a mathematical programming approach to resources allocation that maximizes "the effectiveness of programs with respect to decision criteria and organizational constraints." Although little detail is presented, it appears that decision criteria are long on external benefits and short on market-oriented economic value outcomes. Indeed, the only mention of a fiscal component is as a "budget constraint" rather than an NPV objective. Lusk and Lusk [25, pp. 321–322, 387–418] put forth a "relevance" model based on the senior author's earlier work [26] published in England in 1974. Their evaluation criteria are heavily weighted to external benefits, and the complex matrix algebra and eigenvalue formulation are a classic quantitative application of a planning, programming, and budgeting (PPB) approach to decision making. Unfortunately, PPB is a public-sector tool of minimal relevance to the private sector. Only Silvers and Prahalad [27, p. 164] approach the issue of external benefits correctly.

Industry providers should strive, of course, to act consistently with both public policy and the precepts of good business (doing well). To achieve such

consistency, industry providers should identify external benefits (and costs) and should support governmental actions to insure that appropriate cash flows in the form of subsidies (or taxes) accrue to the organization generating such benefits (or costs). Historically, the public sector has not, as a rule, subsidized health care providers for the societal value of the services delivered. Instead, subsidies have usually been granted in the form of investment capital for specific purposes, such as training programs or physical construction (e.g., the Hill-Burton program). Emphasizing such capital subsidies (including allowability of depreciation and interest expenses as reimbursable under Medicare) while failing to provide operating subsidies to supplement the market prices of services having external benefits in excess of those prices has probably resulted in misallocation of societal resources.⁹ Not-for-profit private-sector organizations are likely to be of suboptimal size in terms of capacity or production. This is true simply because operating subsidies are the only means for attaining optimal outputs of goods and services having external benefits. As suboptimal as the existing and historical resources allocation may be, the results of the decision-making rules advocated by the authors cited above would be even worse: organizations of appropriate size would be doomed to bankruptcy from their inception because of the absence of sufficient cash flows to support the level of activity called for if the external benefits are included in the decision-making equation.

Private-sector health care providers must realize that no investment decision should explicitly consider social good in the absence of attendant cash flows to the institution. If social benefits in excess of charges collected are an

important characteristic of a given health service activity, e.g., the typical hospital emergency room, then we are talking not about an investment decision, but about a dividend decision, and, as in any other industry, dividends can be paid only if the organization's existing portfolio of prior investment decisions is providing sufficient return to support the out-of-pocket costs of dividends, whether those dividends are to shareholders or to the community, in cash or in kind.

In order to do good, the providers in the private-sector health care industry must first do well. This includes, as part of the process of considering investments, making all reasonable efforts to obtain public-sector subsidies in recognition of external benefits generated. In the absence of subsidies, investment proposals that do not provide positive value from their own incremental cash flows must be either rejected or reclassified as "dividends," a disbursement of capital accumulated through economically productive investments.

I have argued elsewhere [29] the economic equivalence between not-for-profit and investor-owned organizations in the private-sector health care industry. This argument rests on several premises. The most fundamental of these is the concept of preservation of capital discussed at some length by me [29], Drebin [30], and others. By preservation of capital we mean the preservation of the value of the capital accumulated by the provider organization. This concept rests at the most basic level on the definitional distinction between public- and private-sector economic entities, and is closely related to the analogy between 1) the community served by the not-for-profit health provider and 2) the shareholders of the other corporations. This analogy is sup-

ported in law by the principle that the community served is entitled to the assets of a not-for-profit provider in the event of liquidation, as well as by the social and economic implications of in-kind dividends discussed above. Regarding the latter, a community holds specific expectations that they will receive such dividends from "their" hospital. In social and economic terms these expectations are in no way different from the expectations of shareholders to receive periodic dividend checks by virtue of their ownership of common stock. Hence, wherever there is a community vested interest in a private-sector organization (or wherever there are shareholders in such an organization), there is a fiduciary presumption that the management of such an organization will, at the very least, preserve the economic value of its capital.

Since an organization's nondebt capital, together with funds derived from liabilities, provides the complete pool of resources that management can allocate among alternative productive assets, the servicing of such liabilities (solvency) and the preservation of capital (economic survival) depend entirely on the choice and management of this portfolio of assets. The investment decision is the process by which this portfolio of assets is chosen, added to, and subtracted from. No other decision is more central to the preservation of capital. Not-for-profit health care providers have consistently misunderstood this relationship, repeatedly demonstrating not only a failure to preserve capital, but a penchant for consuming capital.¹⁰

Not-for-profit and investor-owned segments of the health care industry are also very much alike with respect to taxation. As Long and Silvers [28] demonstrated several years ago, any

third-party payment system, prospective or retrospective, that pays less than full charges for health services is economically equivalent to standard corporate income tax.¹¹ This is because it expropriates margin, the difference between charges and costs, in part, in whole, or, in some cases, at rates in excess of 100 percent.¹² The equivalence between the income tax and reimbursement systems extends even further because the reimbursability of capital-related accounting expenses (depreciation, amortization, and interest) is analogous to the deductibility of such items for corporate income tax purposes. As a result, the concepts of 1) tax subsidies (shields), 2) required rates of return, and 3) the cost of capital,¹³ which have been known and used for years in investment decision making throughout United States industry, can be applied directly and without alteration to investment decision making in the health care sector. While it is not surprising that most providers have yet to adopt this form of analysis, it is essential that they do if there is to be an allocation of resources that appropriately recognizes the economic effects of current or future third-party payment mechanisms.

In sum, there are no important economic distinctions between not-for-profit and investor-owned private-sector health care providers. Indeed, to the contrary, there are overriding identities in terms of effective taxation and required rates of return on nondebt capital. The resulting homogeneity in economic terms requires that analysis of investment decisions be identical in the two subsectors. There is simply no basis for different approaches to the asset allocation decision within the private sector. For not-for-profit providers to behave otherwise is to court economic disaster.

IV. Developing an Investment Decision-Making Capacity

In section III of this paper, I argued that the investment decision and its outcomes are central to the preservation of capital and the ultimate economic survival of any private-sector organization. In this portion of the paper I will examine the resources and information needed for successful investment decision making.

With the exception of capital structure decisions, no other type of fiscal decision depends more critically on the concepts of finance than does the investment decision. Finance, as a definable managerial discipline like accounting or marketing, is a relatively new field, having become a major element of internal corporate decision making only since the Second World War. For example, in 1950 only a handful of the companies then in *Fortune's* 500 used a finance approach (discounted cash flow) for decisions involving asset acquisition or divestment. By 1975, all the 500 largest industrial corporations in the United States used finance methodology in the investment decision-making process.

During this same period of time, however, the health care industry has not used such tools, and, for the most part, does not use them even today. There appear to be two major reasons for this. First, as noted above, until recently health care programs and institutions have not had the accounting and information systems which could generate the data needed for sophisticated investment decision making. Second, and more important, was the historical absence of significant financial risk from bad investment decisions by health providers, at least with respect to real productive assets. This was the case because health services themselves have been relatively iso-

lated from market-determined pricing, thereby allowing the provider great flexibility in price determination, so as to produce accounting profit, if not economic return. And even if this mechanism did not work, there was, historically, a fall-back position in which philanthropic activity underwrote operating losses. Thus, bad investment decisions could be offset in economic terms at two levels, virtually eliminating any significant downside risk.

The current economic environment is such that both these "bail-out" options have become severely limited, if not nonexistent. With rate regulation, cost control, economic stabilization programs, and a great deal of media visibility, political and regulatory forces are affecting price determination much as open competition affects other industries. In addition, while the total annual philanthropic giving is no longer in absolute decline, the amount of current unrestricted giving is so small relative to real investment in the industry as to be of insignificant economic consequence. Thus, it is of increasing importance to providers of health care services that a solid analysis of proposed capital investments be made before the fact, so that institutions and programs are able to establish *ex ante*, and with a high degree of certainty, the economic desirability of allocating resources to particular assets, or of removing certain assets from the organization's portfolio.

In the dozen or so years since the implementation of the Medicare legislation, the health care industry has made tremendous strides forward in developing its fiscal expertise. In this short period of time, the health care industry has, amazingly, accomplished what took the rest of American industry the greater part of a century. For example, most not-for-profit acute-care

institutions in the pre-Medicare 1960s did not (and, in fact, could not) prepare formal income statements and balance sheets for public accounting audit, and thereby resembled a large part of United States industry immediately following the Civil War. Since 1966, not only have double-entry accounting systems become standard in the health care industry, but highly sophisticated financial accounting and even the widespread use of managerial accounting have brought the health care industry to a level of expertise that was not achieved by United States industry generally until after the Second World War. In the second dozen years following Medicare, it is reasonable to assume that the health care industry will continue to follow the lead of other industries. Thus, we can expect its decision making to incorporate the fiscal tools that have evolved in United States industry during the past three decades. Specifically, this means that the health care industry must 1) maintain its financial accounting skills, 2) expand its managerial accounting expertise, and 3) begin to use the tools of finance as the primary fiscal component of organizational decision making.

The existence of the discipline of finance, and the manner in which it differs from the accounting disciplines, is reasonably well known in the investor-owned segment of the health industry. However, finance is neither widely recognized nor well understood in the private not-for-profit segment. While some recognition of the distinction exists in health literature,¹⁴ the great bulk of this literature either fails to make the distinction between accounting and finance, or misrepresents accounting by implying that it is finance.¹⁵ While a great deal of confusion has thus been created, there can be little doubt that the appropriate adapta-

tion of the tools of corporate finance in language and label to the health care industry will be the next major thrust in the rapid evolution of fiscal sophistication in the management of health delivery.

The financial accounting model and the generally accepted principles it embodies were designed to present information about the financial position and performance of an organization on a historical basis. For the purposes of presenting a record of accomplishment, showing external parties the current position of the organization based on output already delivered or produced, and providing the information external regulators require by choice, the financial accounting model serves well. (It is also of some use as input to long-run pricing, or rate decisions.) This is because the financial accounting model places great emphasis on 1) recognizing gradually, across long periods of time, certain large one-time expenditures (e.g., costs of some fixed assets), 2) generally attributing all costs to specific units of output (e.g., overhead allocations), and 3) with respect to units of output, recognizing dollar costs of factor inputs as well as dollar benefits from the output itself at the time the output is actually delivered to a consumer or the financially responsible party is billed for the output received (i.e., accruals). Further, the financial accounting model accomplishes all of this while applying the principle of consistency in two dimensions. First, it insures consistency across time with respect to the individual organization, assuring comparability between last year's statements and those of prior years. Second, due to the wide acceptance of the technical aspects of the accounting model, there is reasonable consistency in the manner in which financial statements are prepared for individual or-

ganizations within an industry, and, to a lesser degree, throughout the economy. Consequently, some historical comparisons can be made not only between the given organization and itself at different time points, but also between that organization and others at the same time point.

From this perspective, it is easy to understand why external parties, particularly regulators, have come to rely on the statements produced by the financial accounting mode. With particular regard to taxation authorities and third-party payers, the financial accounting model, with its generally accepted principles, consistency, and potential to allow comparisons of the type described above, and with all this attested to by an arm's length, disinterested third party (the CPA), provides the only reasonable basis on which to administer public programs of taxation and third-party payment in an even-handed manner. As long as the expropriation of private capital through such mechanisms is done with uniformity and legal due process, it really does not matter that, in a technical sense, the reporting model on which it is based is fundamentally noneconomic.¹⁶

It is equally reasonable that the main thrust of managerial accounting has been in cost definition, cost finding, and budgeting systems that attempt to forecast what the financial accounting model's statements will look like. Such activities are essential to the process of minimizing taxation and maximizing reimbursement, since these mechanisms rely on the financial accounting model. Furthermore, most politicians, together with the media, focus on the concept of cost, even though the concept itself is generally not understood by regulators, legislators, or the fourth estate. Thus, managerial accounting is also very important in that it provides information for public relations and

marketing purposes, as well as input to managerial decisions, which can affect costs. In addition, since the accounting concepts of costs, revenue, income, and others, are not wholly uncorrelated with economic value, they are often reasonable surrogates, particularly in smaller organizations that cannot afford the complete spectrum of fiscal expertise, for the information ideally available for optimal managerial decision making.

In a pure sense, however, very little information typically generated by either financial or managerial accounting activities is of much relevance to the types of decisions that are addressed by corporate finance. Finance is interested only in the future, and accounting systems that were designed to be retrospective (or to forecast what future retrospective statements might look like) simply cannot provide directly relevant data for many managerial decisions—for example, the investment decision. To the extent that tomorrow will be like yesterday, the accounting system can provide management with some basis for extrapolation, but whether extrapolation is ever superior to excogitation as a forecasting method is open to much debate.

Private-sector organizations, be they investor owned or not for profit, unlike tax collectors and reimbursers, operate in a day-to-day environment not of accounting markets but of economic markets, to include money markets, capital markets, and markets for goods and nonfinancial services. Although all these markets have imperfections, with the result that they are less than the economist's "perfect market," participants in all of them understand and deal with, if only at the intuitive level, the following realities: 1) inflation exists and causes the purchasing power of money to erode across time; 2) independent of inflation, money has a time

value associated with the postponement of consumption, so that even with no changes in price levels, a dollar today is more valuable than a dollar tomorrow; 3) consumption of goods and services is ultimately accomplished in exchange for cash—thus it is the receipt and disbursement of cash that ultimately matters; 4) fiscal risk (the variability and uncertainty associated with the receipt and disbursement of cash) is important and, in general, is an economic characteristic to be avoided unless compensation is received for the risk bearing. The financial accounting model incorporates and/or recognizes none of these realities; the actual world beyond income statements and balance sheets, the world where we live and do business as we exchange real and financial goods and services, understands these realities and incorporates all of them into an assessment, however imperfect, of economic value. It is this economic value that must be the focus of managerial decision making, not the “values” that happen to show up on the books. Managerial awareness and use of market values and market-value criteria for decision making are far more important than knowledge of what a reported book value is on a balance sheet.

Since most of the financial managers in the health care industry (as well as most of the academicians teaching in the fiscal area in our accredited master's degree programs) were educated with an emphasis on accounting and have worked from an accounting perspective ever since, it is not surprising that the tools and concepts of finance are not yet widely understood in this industry. These individuals are, of course, exactly what this industry has needed as it has developed its first-generation fiscal expertise in an environment of cost-based payment mechanisms. In the second dozen years

following Medicare, however, the industry should supplement the fiscal skills now in place with those additional area of expertise which will bring the quality of its fiscal management abreast of the rest of the private-sector economy. Operationally, this means that managerial fiscal expertise will have to include persons and procedures that can generate not only forecasts of fiscal data, but forecasts in terms of cash.¹⁷ For purposes other than calculating taxes and reimbursement, the industry must recognize the irrelevance of accruals, book values, and the like, and begin to emphasize cash flows, market values, and the importance of time-value and inflation effects. The industry needs persons who are skilled in dealing with imperfect and approximate data, persons who can operate outside the bounds of generally accepted accounting principles, persons who can conceive of a cost of capital as something different from the interest rate on bank borrowing, and persons who can implement fiscal decisions against criteria that focus on economic value rather than on concepts of income, earnings, costs, or revenues.

The traditional practice of treating all things fiscal as products of the financial accounting model will be a difficult one to supplant. However, if the industry is to make good investment decisions, it is absolutely essential that finance concepts replace accounting methodology for this purpose. A major effort is required by all academicians and practitioners in health care management to educate themselves and their colleagues so that they can both understand and be sensitive to the important distinctions between accounting and finance.

One of the difficulties in the area of investment decision making in the health care industry is that most of the

existing literature addresses this critical finance decision in financial accounting terms. For example, Dittman and Ofer [38] begin their analysis of the effect of cost reimbursement on various investment decision models with a hypothetical income statement for an institution. In essence, they take the difference between revenues and expenses, add depreciation back in, and obtain a number which they label "cash inflow." In an accrual accounting system, this is not a cash flow at all, but a funds flow. The failure to recognize this important difference can be especially critical in institutions where 1) the real volume of service is changing significantly, 2) collections or payables periods are subject to wide fluctuation, and/or 3) there is substantial inflation in the prices being paid by the provider.

Another major problem area has to do with the definition of discount rates for the purposes of ascertaining present values of expected future cash flows. Cleverley [36], Dittman and Ofer [38], Herkimer [23], and Lusk and Lusk [25] all avoid any discussion of the cost of capital, and instead substitute an interest rate or "opportunity rate" in the place of a cost of capital. Cleverley, for example, in his chapter on "Capital Project Analysis," advocates the use of "the hospital borrowing rate" to evaluate a "lease versus buy" question (itself an incorrect commingling of the investment decision with the capital structure decision). Dittman and Ofer [38, pp. 41 ff.] also advocate the use of an interest rate where a cost of capital is needed. Herkimer [23, p. 258] suggests a rate "usually determined by top management [representing] the rate that can be earned by alternative uses of investment capital." Lusk and Lusk [25, p. 322] make only a passing reference to "some institutional or bank interest rate" at which "savings can be in-

vested." Later [25, p. 333] they discuss an "interest rate implicit in [a] lease" for an annuity calculation of the capitalized value of an asset. None of these authors addresses the elements of the cost of capital, the effects business risk and financial risk have on that cost, or the implications underlying the mechanics of present value analysis using a cost of capital for discounting purposes.

Berman and Weeks [22, Chap. 17] handle the cost-of-capital question somewhat differently; they maintain that, "Orthodox theory holds that the discount rate should be equal to the rate of return which the firm earns on its total assets. In the case of a hospital, this approach is of little use. The specific discount rate chosen by a particular hospital must be a subjective decision." I have never read the "orthodox" theory, but I am aware that one can use established finance theory on cost of capital to demonstrate that if any particular discount rate is used consistently for all asset selection decisions, then the expected rate of return on the market value of those assets will be equal to that discount rate—a tautology. Judgment, of course, is required in all management decision making, and selecting a cost of capital is no exception. (See Long [29] for one empirical methodology for determination of cost of capital by not-for-profit hospitals.)

Among current writers in this area, only Silvers and Prahalad [27, pp. 167–169] offer a discussion of discount-rate selection that is generally valid. Unfortunately, the space they devote to this question is insufficient for careful development of the concept.

Both Ilett [32] and Suver and Neumann [33] have explicitly considered the cost of capital in a health-care context. Ilett's article is weakened by a major flaw—he fails to incorporate the effect of cost-based reimbursement

on the true cost of debt capital. Suver and Neumann, while avoiding this error, make another serious conceptual error, one Ilett makes as well. Specifically, both these articles use book-value weights in their calculations of the overall cost of capital, thereby arriving at numbers which, in addition to being without economic meaning, can lead managers to make incorrect decisions, such as accepting negative net-present-value proposals.

It is obviously difficult to be optimistic that rapid progress will be made by practitioners in investment decision making when authors (most of whom are academicians), publishers of books, and editors of journals produce writing that ignores the most fundamental tenets of finance as it affects the investment decision. With the single exception of the Silvers and Prahalad book [27], most existing writing on this subject would not make the grade were it to be evaluated in terms of the standards used for a final examination in a required MBA finance course. Not only is it true that none of the existing writings adequately discusses the costs of capital; none even begins to address the question of risk measurement and its incorporation into the investment decision-making process.

If the health care industry is to gain an expertise in finance equal to that which they already have in accounting, the academic community is going to need to do a much better job of fulfilling its traditional role of guiding, in time and in concept, the actual practice of management.

V. Risk, Gamesmanship, and the Investment Decision

As academic research and writing begin to fill the major gaps between current industry practice and the type

of investment decision making that will be needed during the 1980s, we should see useful methods evolving for 1) estimating the market value of nondebt capital in the not-for-profit private sector, 2) estimating costs of capital, and 3) establishing policy at the board of directors' level regarding capital structure, required rates of return on nondebt capital, and capital acquisition and disbursement (dividends). It is going to be of crucial importance that the industry's investment decision making give careful thought to the question of fiscal risk—the expected variability in future cash flows. A great deal of research and experience in corporate finance merely awaits appropriate translation for the health care industry (see end note 2). In addition, however, significant work focused on the health care industry is also badly needed. Once the industry has begun to achieve a better understanding of fiscal risk, there is every reason to believe that creative ways in which to use these concepts will be formulated.

The industry already has an enviable achievement record in maximizing reimbursement under cost-based contracts. Talking with any Medicare intermediary or reading PRRB rulings, one learns of numerous instances in which an exceptionally sophisticated understanding of the financial accounting model has successfully increased provider reimbursement. The industry's record in reimbursement maximization is comparable to anything manufacturing corporations have achieved in the economically equivalent realm of income tax minimization. According to reports of Hellinger [39] and Salkever and Bice [40], health care providers have also made highly sophisticated responses to such regulatory constraints as certificate of need (CON) legislation. In general, these studies show that while CON regulation has concentrated

on controlling the aggregate number of acute-care beds, providers have simply shifted their capital expenditure dollars to the expansion of ancillary services without reducing the total dollar amount of new capital investment. Not only is it the case that ancillary activities usually provide a much higher economic return than inpatient bed-days; but they are also in line with the priorities enunciated in the media and in the political arena: a greater emphasis on primary, preventive, and ambulatory care. There seems, therefore, to be little doubt that individual provider organizations (and, to a lesser degree, the industry as a whole) can act in their own best interest in ways that are highly sophisticated in economic terms. There has been a clear demonstration of expert gamesmanship.

As concepts of fiscal risk are developed and become accepted in the health care industry, we can properly expect them to be employed in an adversary context, both within the provider community and between the provider community and various regulators. For example, Silvers, in his unpublished paper [41,—available from the author at Case Western Reserve University], demonstrates the applicability of formal game theory (following Von Neuman and Morgenstern) to certain investment decision-making situations. The paper implies that opportunities for economic gain for not-for-profit private-sector health care providers can arise from activities such as private agreements among providers for voluntary market segmentation, or from provider versus provider confrontations in CON public hearings, where, in effect, exclusive monopoly licenses to provide certain services are granted. As Silvers shows, capacity/market-share relationships may become a central component of the overall process of investment decision making, particularly

as the health care industry becomes more heavily regulated.

Another way in which the measurement of risk may become central to investment decision making in the years ahead had to do with the pricing of services made available by such investment. In an environment of rate review and rate regulation, there is no reason to believe that the famous *Hope* case,¹⁸ or some economically equivalent variant, will not be brought to bear. When that occurs, and if the health care industry has achieved effective measurement of risk, we can expect to see some interesting applications of the economic requirement that return be commensurate with risk. An excellent review of both the theory and the application of risk measurement in a rate-regulated environment (specifically, the public utility industry) can be found in Myers [42], Pettway [43], and the pieces by Peseau et al. [44]. Another logical consequent of ensuring that returns are commensurate with risk is foreshadowed in the article by Toomey and Toomey [45, pp. 17–20]. This article discusses the concept of making explicit dividend decisions as to both types and quantities of dividends in either monetary or in-kind returns to equityholders (the community served). The idea of such dividend decisions is raised in the context of recognizing a cost of capital obtained from nondebt sources. It is certainly appropriate, for example, to view the Hill-Burton regulations, which specify minimum quantities of free care to be delivered by recipients of Hill-Burton grants, as a form of a required rate of return on nondebt capital.

Another interesting question to be explored in this connection has to do with the appropriate behavior of investor-owned institutions which not only serve a particular community but have legal shareholders as well.

Specific questions aside, the concept of identifying appropriate risk-sensitive rates of return on nondebt capital in the not-for-profit sector will be one of the major challenges to be faced, not only by individual providers, but by rate regulators as well. In the absence of explicit primary and secondary equity markets for this sector, the task of rate-of-return identification is difficult but by no means impossible. Since the not-for-profit sector interacts regularly with debt capital markets, and since equity markets in the investor-owned sector exist as a surrogate for their not-for-profit brethren, the task is clearly approachable. Once identified empirically, all of the types of applications discussed above become feasible.

Fiscal risk is a real economic factor, and it is an important one; it is measurable, and it needs to be incorporated into the investment decision-making process.

VI. Summary and Conclusions

This paper has addressed three major areas of concern that will affect investment decision making in the health care industry. Mastery of each of these principles can have a critical effect on the investment decisions that will be made during the second 12-year period post-Medicare. A fundamental recognition of the common economic responsibilities of management in any private-sector organization (for profit or not for profit), an ability to move beyond the accounting model for decision-making purposes so as to employ appropriate personnel and information systems to support that decision making, and an ability to deal with fiscal risk in a sophisticated way will be the major skills to be mastered not only by practitioners in the health care industry, but by faculty in our universities, as they generate applied research for current

managers and educate the next generation of industry leaders. It is not difficult to list specific topics in need of substantial attention in academic writing, in the university classroom, and, most importantly, in the institutional and programmatic settings within the private-sector health care industry. Indeed, this paper has listed many specific areas of need. These include 1) the need to develop specific criteria for establishing appropriate target rates of return on equity capital in the not-for-profit sector; 2) the need to reevaluate existing activities and programs systematically, as a part of a routine consideration of divestment opportunities; 3) the need to establish net-present-value approaches to fiscal evaluation of investment proposals as the industry standard, dispensing with such anachronisms as payback and accounting rates of return; 4) the need to place social externalities in an appropriate context for private-sector decision making; 5) the need to develop and employ finance-oriented personnel and information systems in parallel to the excellent accounting and cost report systems already in place; and 6) the need to incorporate the measurement of financial risk into the day-to-day decision-making activities of management. Compiling a list such as this is relatively easy; meeting such needs both immediately and in the longer term is a much more challenging prospect.

In my opinion, the industry is not to be faulted because these needs exist. Indeed, as I indicated above, the industry is to be commended for the fantastic progress it has made: within a 12-year period, it has incorporated experience from other domestic industries into its own operations. The need for timely modification of what now exists, however, offers a major challenge to industry leaders and to the academic community.

There are clearly a number of actions industry leaders can take immediately to address some of the existing needs. For example, the simple requirement of cash flow forecasting is a first step toward building the necessary information systems. Practitioners can certainly stop letting positive externalities form a basis for proposal adoption; they can certainly stop commingling financing and investment decisions; and they can certainly stop treating depreciation, funded or otherwise, as if it has any implication whatsoever for the replacement or renewal of any particular assets. It is equally important to speak out at industry and professional association gatherings on the importance of economic evaluation of operating proposals. Educating existing managers and board members about relevant fiscal criteria for decision making (e.g., net present value) should be a high priority activity. While it is not always an easy task in terms of time, money, or predisposition, it is nonetheless essential to a healthy private-sector industry. The commitment of organizational resources to such educational processes is, I believe, itself an important investment decision with significant positive net present value.

As to the role of the academic community in the years ahead, it must do an increasingly better job of fulfilling its traditional societal responsibility of conceptual leadership. The faculties of most accredited Master of Business Administration programs have, over the years, made many of the important contributions to improved managerial decision making in major industries. The faculties of accredited programs in health administration must require no less of themselves. In preparing this paper, I surveyed much of the existing literature (academic and practitioner) purporting to treat the investment decision in the private-sector health care

industry. As is clear from the body of this paper, I was gravely disappointed.

There are many reasons why I and my colleagues around the country appear to have failed thus far to provide the conceptual leadership that is needed. As educators in professional schools, some of us have given higher priority to teaching than to writing; some of us have confined most of our writing to our basic discipline instead of applying our discipline to health care; some of us are accountants by training and by experience, and we simply do not understand finance; some of us have discovered conflicts between the editorial policies of the trade journals and our preference for the types of articles we believe are 1) important to the future practice of management in the industry and/or 2) important to our own promotion and tenure; some of us have found the consulting dollar too seductive and have behaved as though what we knew was proprietary information to be sold only to the highest bidder; and some of us have found easy royalty dollars too tempting and have written books with a primary objective of maximizing the product of selling price times the number of units sold, instead of maximizing the quality and educational value of the contents. I also fear that much of what has gone on in our classrooms has been of a quality little better than that of the literature.

It is not that my academic colleagues and I lack the talent to meet this challenge. But if we are to have a significant influence on the future quality of investment decision making as well as on other areas of financial decision making in this industry, then we must sharply upgrade both the quality and the quantity of 1) our written output and 2) our master's degree graduates in this subject area. Current curricula, much like current

industry practice, remain largely accounting oriented. These accounting strengths should under no circumstances be allowed to languish, nor should accounting content be reduced to make room for necessary additional fiscal material. But the additional curricular material in finance will be essential, and space in the curricula and

talent to fill that space should be a major priority of accredited teaching programs. Similarly, publication output from the academic community must increasingly move ahead of current industry practice if we are to ensure the existence of a strong private-sector health care system in the years ahead.

END NOTES

¹I recognize that the admissions likely to be eliminated first are those with admitting diagnoses associated with relatively short lengths of stay. Such an initial reduction would necessarily produce higher average lengths of stay (remaining admissions, on average, would be "sicker"). In my opinion, however, this phenomenon will be more than offset by 1) the existing trend in medical practice toward ever earlier postsurgical ambulation, 2) pressure from third-party payers for convalescence to occur in non-acute-care settings, and 3) the continuing application of new technology to more time-efficient therapies.

²Major thrusts in the area of the risk-altering investment decision are the Capital Asset Pricing Model (CAPM) and several newer options/arbitrage formulations. The CAPM was developed by Sharpe [2] and Lintner [3] and its applications are discussed in a straightforward way in Weston [4] and in Boudreaux and Long [1, Chaps. 14–16]. The basic options/arbitrage paper is the one by Black and Scholes [5]. Smith [6] presents a very good review of this literature and Black [7] provides an excellent explanation of some of its thrusts. Two seminal discussions of the direct application of these modes to the firm's investment decision appear in Breeden and Litzenberger [8] and Banz and Miller [9].

³The concept of operational budgeting would be relevant to the investment decision only in the extreme circumstances of highly restrictive regulation and/or of arbitrary isolation of the decision-making process from the financial markets, e.g. conditions of capital rationing imposed for noneconomic reasons; Wacht [10] has recently discussed the financing of a "capital budget," but, of course, a firm's financing decisions (capital structure determination and capital acquisition/disbursement choices) are conceptually and pragmatically separate from its investment decisions.

⁴The standard work in the modern theory of public goods is by Samuelson [11]. For a monograph-length discussion, see Buchanan [12]. Klarman [13] traces the evolution of cost-benefit analysis in public-sector program evaluation from a synthesis of the theory of public goods and the public expenditure branch of public finance.

⁵For example, various United States military hospitals have been generally underused since the Vietnam war, with average occupancy in some as low as 10 percent. Consider the potential effect on private-sector hospitals with geographic proximity to such federal institutions if the Department of Defense should suddenly define an expanded population of eligible patients.

⁶“Risk management” is a vogueish euphemism for 1) the process of designing institutional insurance programs (including self-insurance) and, in some instances, 2) the process of reducing the probability of incidents that might trigger claims and/or lawsuits (the “safety” function). “Risk” in the context of finance, of course, refers simply to the uncertainty (variability) in forecasts of expected future cash flows.

⁷The concept of capital as I use it here is roughly equivalent to the “southwest corner” of an organization’s balance sheet. If the accounting model reported market rather than book values, and if it also incorporated price-level adjustments, then nondebt capital would be given numerically by the nonliability portion of the right-hand side of the balance sheet. By “preserving capital” I mean the maintenance of the real (adjusted for inflation) purchasing power of the nondebt, nonlease capital of the organization after the servicing of all debt indentures and other contractual obligations.

⁸Fuchs [18 pp. 224 ff.] presents a straightforward discussion of “externalities” in the context of health services.

⁹The failure is actually even worse. For example, not only have operating subsidies not been paid by Medicare, for example, but operating taxes have been levied using cost-based mechanisms. See Long and Silvers [28].

¹⁰An alternative philosophical position exists that advocates the consumption of capital. This view suggests that the not-for-profit private sector should leave the preservation of capital to the for-profit sector and should concentrate instead on the conversion of its capital into services. As this private capital is consumed, this view requires that the organization periodically seek capital renewal from eleemosynary for-profit entities that have been busy in capital formation. In my opinion, this advocacy is 1) theoretically incompatible with the basic concept of a private-sector organization as an ongoing enterprise (both legally and in accounting terms), and 2) operationally incompatible with the not-for-profit sector’s heavy reliance on debt capital, which requires contractually not only return on capital but also return of capital.

¹¹One could also view third parties as partial monopsonists extracting discounts from providers in a form equivalent to an excise tax. The equivalence of cost-based reimbursement to income taxation also creates a situation of double taxation for investor-owned providers. This results in a complex arrangement where reimbursement shortfalls (taxes) are deductible for IRS purposes, but taxes paid to the IRS are not reimbursable. The double taxation phenomenon is offset to a degree by reimbursers that provide some separate return on equity capital. Yoder [31] had recently shown the possibility that investor-owned status is economically superior to Internal Revenue Code, Section 501 (c) (3) incorporation in certain circumstances.

¹²The latter cases occur when certain costs are disallowed and/or cap rates go into effect.

¹³Ilett [32], Suver and Neumann [33], and Wacht [20] have recently introduced health care providers in the not-for-profit private sector to the idea of the cost of capital. Wacht, unfortunately, tends to emphasize a public-sector approach involving the social rate of discount. The Ilett and Suver and Neumann treatments are reasonable introductory steps (see Section IV of this paper).

- ¹⁴See, for example, Silvers [34]. The distinction between accounting and finance is also noted implicitly in the introduction to [35].
- ¹⁵Four examples of this partial treatment are found in Berman and Weeks [22], Cleverley [36], Herkimer [23], and Lusk and Lusk [25]. Berman and Weeks's text contains some coverage of working capital management and one chapter on "Capital Investment Decisions;" Cleverley's work, the title of which implies that the book is about finance, also devotes a part of a chapter to the selection of investment projects; Herkimer's book also treats the subject of managerial accounting, with the single exception of a chapter on capital expenditure planning. By generous estimate, the three books combined devote about 200 of over 1,200 pages to finance topics, and only 80 pages of the 200 to the investment decision. By contrast, Lusk and Lusk [25] have a more honest title since "control" is a concept clearly associated with managerial accounting. Unfortunately, Lusk and Lusk present several finance topics (e.g., leasing, capital budgeting) in a manner that attempts to achieve consistency between these topics and the accounting model. The result is considerable violence to the true economics of these subjects. The only text currently available that contains more than a modicum of finance is Silvers and Prahalad [27], which fortunately is also economically sound in its presentation.
- ¹⁶A perfect illustration of the noneconomic nature of Medicare reimbursement is found in the case of the additional monies disbursed to proprietary providers under the rubric "return on equity capital." Essentially, equity capital is defined as the provider's investment in net fixed assets plus net working capital (current assets less current liabilities). For the simple balance sheet, this is net worth. The allowable rate of return is one and one-half times a market-determined rate of interest on public debt instruments. The gross dollar return (product of the historic book value of equity capital times the rate) is then multiplied by the proportion of service delivered to Medicare patients to determine the amount of the Medicare payment for "return on equity capital." (See Title 42 of the Code of Federal Regulations, Section 405.429, for the formal definitional provisions.) Of course, the actual amount owners have invested in any organization is the market value of its equity, and only by purest coincidence would the book value of equity equal its market value. Further, there is no reason to believe that investors' required rate of return on the market value bears any resemblance to the rate of return defined in the federal regulations. Thus, while investor-owned institutions are happy to receive the additional monies, few are so naive as to view it as anything approaching an appropriate return on their investment.
- ¹⁷For an example of the requirement of cash rather than accrual information by one Health Systems Agency for the determination of financial and economic feasibility of proposals submitted for review under Section 1122 of the Social Security Act, see Long and Capper [37].
- ¹⁸*Federal Power Comm' v. Hope Natural Gas Co.* 320 U.S. 591, 603 (1944): "... the return to the equity owner should be commensurate with the returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise so as to maintain its credit and to attract capital."

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