The Economics Of For-Profit And Not-For-Profit Hospitals

Nonprofit hospitals owe society community benefits in exchange for their tax exemption, but what is a fair amount?

by Uwe E. Reinhardt

ABSTRACT: This paper examines the economics of for-profit and not-for-profit hospitals through the prism of capital acquisitions. The exercise suggests that of two hospitals that are equally efficient in producing health care, the for-profit hospital would have to charge higher prices than the not-for-profit hospital would, to break even on capital acquisitions. The reasons for this divergence are (1) the typically higher cost of equity capital that for-profit hospitals face; and (2) the income taxes they must pay. The paper recommends holding tax-exempt hospitals more formally accountable for the social obligation they shoulder, in return for their tax preference.

Much has been said about the level of the “playing field” on which for-profit and not-for-profit hospitals compete for patients, revenues, and profit margins. Leaders of the nonprofit sector argue that for-profit hospitals enjoy the advantage of easy access to “cheap” equity capital and, moreover, are not burdened with the presumption that they owe society uncompensated community benefits. Leaders of the for-profit sector counter that nonprofit hospitals benefit from a variety of tax preferences and, moreover, need not pay any monetary returns to anyone for the equity capital made available to them. Each side regularly commissions research to bolster its case.

One can put these claims and counter-claims into sharp focus by examining them through the lens of capital acquisitions. To that end, this paper considers two hospitals serving the same market area, each contemplating the acquisition of an identical piece of medical equipment that can be purchased for $4 million in cash. It assumes that the equipment in question has an estimated use life of six years and a zero salvage value after that. Finally, the analysis assumes that in each hospital, the machine would produce annually 3,100 units of service, for each of which $700 is received in cash. Total annual cash operating expenses to produce these services are assumed to be $1.2 million.

One hospital, which we shall call Healthcare Inc. (hereafter HCI), is investor-owned. It pays a tax of 35 percent on taxable profits. The other hospital, which we shall call Community Medical Center (hereafter CMC), is nonprofit. It does not pay any income taxes and can borrow in the tax-exempt bond market, a tax preference not available to the for-profit hospital. For the sake of simplicity we ignore property taxes, although they can constitute a significant additional expense imposed mainly on the for-profit sector.

Because we intend to assess arguments that center strictly on the economic advantages or disadvantages imputed to the two types of hospitals, we shall develop for each hospital a standard capital-budgeting exercise that would be used by a business firm. That approach is realistic, because the markets for hospital services tend to be marked

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by high excess capacity, which forces even nonprofits to focus heavily on profit margins. The exercise reveals that from a strictly economic perspective, and other things being equal, nonprofit hospitals do enjoy a decided advantage over for-profit hospitals. Although for illustrative purposes that conclusion is derived here from a specific numerical example, it is in fact quite general and would emerge from any other project evaluation. The tax preference enjoyed by the nonprofit sector is the main source of that advantage. In addition, however, nonprofit hospitals arguably may have a lower cost of financing as well. Contrary to conventional wisdom, that advantage does not stem from the nonprofit hospital’s ability to borrow in the tax-exempt bond market. If the nonprofit does enjoy a lower cost of financing, that advantage would have to reside in a lower cost of equity capital.

Before proceeding with the formal analysis proposed here, it is worth noting that some commentators on the for-profit/nonprofit controversy assume that the equity capital available to for-profit hospitals is particularly cheap—cheaper even than debt capital. For example, Gary Claxton and colleagues have remarked that equity can be a cheaper method of raising capital than debt, particularly for firms with good growth potential whose stock may be valued at a high multiple of its current earnings.

Bradford Gray echoed that proposition:

The higher the stock price in relationship to earnings, the cheaper the organization’s access to equity capital.

These authors have in mind here not the cost of equity financing as it is defined in the theory of corporate finance and used in this paper. Rather, they allude to the fact that through a cleverly staged program of acquiring other firms in stock-for-stock mergers, an investor-owned firm can seduce Wall Street into vastly (but temporarily) overvaluing the firm’s common stock. That strategy effectively allows the firm to acquire real assets “on the cheap,” so to speak, with funny money that it can print at will but whose value will eventually collapse. Some observers may see an economic advantage in the ability of for-profit entities to play this funny-money game—a game not available to the nonprofit sector. This is not the sort of economic advantage explored here.

### Evaluating Capital Acquisitions

**Incremental operating cash income.**

The first step in evaluating the purely economic merits of acquiring capital equipment is to estimate what incremental that acquisition will add to the hospital’s net cash operating income in each year of the equipment’s use life, other things being equal. The term *net cash operating income* signifies that only cash flows matter in this evaluation and that net cash income is to be calculated after all cash operating expenses (such as labor and supplies), but prior to the deduction of interest expense on debt (which I consider separately below). For the tax-paying HCI, this incremental net cash operating income would be calculated on an after-tax basis, which means that it would include the tax savings HCI would achieve by claiming tax-deductible depreciation expense on the machine.

Exhibit 1 presents the incremental net operating cash flows attributable to the proposed capital acquisition for each of the two hospitals (after taxes for HCI). The difference in these cash flows is driven strictly by the tax status of the two hospitals. The cash flow in Year 0 represents the initial outlay on the equipment. In its bottom two rows the exhibit also shows the so-called net present values and internal rates of return inherent in these cash flows, evaluation criteria that I explain further on.

The second step in this capital-budgeting exercise is to explore whether the projected stream of incremental net after-tax cash operating income expected from the proposed acquisition is sufficient to cover fully the after-tax cost of financing that acquisition. As shown below, the cost of financing is calculated as a weighted average of the cost of debt and equity financing, where the weights reflect the mix of debt and equity that the firm
seeks to maintain in its long-term financing strategy. This weighted average cost of financial capital (generally referred to as the WACC) takes the form of an interest rate. It is used to convert each future year’s incremental net cash operating income attributable to the proposed acquisition into its present-value equivalent. If one sums these present-value equivalents over the use life of the equipment and deducts from that sum the initial cost of the acquisition, one obtains the so-called net present value (NPV) of the decision to make the acquisition.

It can easily be shown that if the estimated NPV of a proposed acquisition is positive, then the incremental net cash operating income yielded by that acquisition is more than adequate to cover the total cost of acquiring and financing it. The acquisition would be made, because it is projected to enhance the firm’s economic value. On the other hand, if the estimated NPV were negative, then the acquisition would not cover its cost of financing. From a purely economic perspective, the acquisition should not be made, because it would detract from the firm’s economic value. The firm simply breaks even on the acquisition if the NPV is projected to be zero.

**Calculating HCI’s cost of financing (WACC).** We assume that HCI can sell newly issued bonds at a market price that implies an interest cost to HCI of 9 percent. This is the annual rate of return that prospective purchasers of the firm’s bonds seek to earn on investments in bonds of this risk class, plus an allowance for the cost of issuing and selling new bonds through an investment banker. Under our tax code, interest on its debt is a tax-deductible expense for a tax-paying entity. HCI’s after-tax cost of debt financing therefore would be only 5.85 percent, that is, $9\% \times (1 - 0.35)$. HCI can obtain equity capital either by selling new stock certificates in the open market or by retaining and reinvesting part of the earnings that in principle belong to the current shareholders. In this exercise we assume that HCI’s cost of equity financing is 15 percent. This return can be bestowed on the shareholders either in the form of annual cash dividends or as capital gains—that is, through increases in the future market price of the firm’s stock. Should HCI fail to provide its shareholders that expected rate of return, then the market price of its common stock would decline. Thus, one can view a firm’s cost of equity capital as the rate of return that the firm must provide its shareholders on their investment in the firm’s common stock merely to maintain the current market price of that stock. The imperative to maintain and, ideally, to enhance the market price of a for-profit hospital’s common stock is a stringent managerial constraint not faced by the managers of nonprofit hospitals, who can pursue longer-term strategies without constant

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**EXHIBIT 1**

<table>
<thead>
<tr>
<th>Year</th>
<th>For-profit HCI’s perspective</th>
<th>Nonprofit CMC’s perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>$-4,000,000</td>
<td>$-4,000,000</td>
</tr>
<tr>
<td>1</td>
<td>910,000</td>
<td>970,000</td>
</tr>
<tr>
<td>2</td>
<td>1,078,000</td>
<td>970,000</td>
</tr>
<tr>
<td>3</td>
<td>899,300</td>
<td>970,000</td>
</tr>
<tr>
<td>4</td>
<td>791,500</td>
<td>970,000</td>
</tr>
<tr>
<td>5</td>
<td>791,500</td>
<td>970,000</td>
</tr>
<tr>
<td>6</td>
<td>711,700</td>
<td>970,000</td>
</tr>
<tr>
<td>Net present value (NPV)</td>
<td>$-309,463</td>
<td>$495,097</td>
</tr>
<tr>
<td>Internal rate of return (IRR)</td>
<td>8.44%</td>
<td>11.90%</td>
</tr>
</tbody>
</table>

**Source:** Author’s analysis.
Monday-morning quarterbacking by Wall Street analysts.

To appreciate why an investor-owned firm’s cost of equity capital is so high, one must understand what determines that rate. According to modern finance theory, the rate of return that the suppliers of equity capital to a business firm expect from such investments has two distinct components. The first is the rate of return that these investors could have earned by investing their funds in a risk-free asset, such as a long-term U.S. Treasury bond, rather than in the firm’s common stock. The second component is a premium for the risk that the suppliers of equity capital assume by investing their funds in the common stock of this particular firm, rather than in the risk-free asset. Broadly speaking, risk in this context means the considerable uncertainty surrounding the magnitude of the returns to shareholders that are promised by the firm. That uncertainty depends on the firm’s particular set of revenue-producing product lines and how strongly these revenue flows are influenced by general economic conditions.

Under current tax laws, the returns that an investor-owned firm bestows on its shareholders are not considered part of the firm’s tax-deductible business expenses. Therefore, HCI’s cost of equity capital (assumed to be 15 percent) must be earned by the proposed capital acquisition on an after-tax basis. If we assume that over the longer term HCI seeks to finance its capital acquisitions with a mixture of 40 percent debt and 60 percent equity, and that its pretax cost of debt is 9 percent, then the firm’s overall, weighted-average annual after-tax cost of financing (its WACC) can be calculated as $k = 9\% \times (1-0.35)(40\%) + 15\%(60\%)$, which comes to 11.34 percent. This is the interest rate at which HCI would convert the incremental annual cash operating income it expects from the equipment into their present-value equivalent, to calculate the NPV of the proposed acquisition. That is, the rate implies that for HCI to break even on the proposed acquisition, the annual net after-tax cash operating income per $100 sunk into that equipment must be at least $11.34. This is why the firm’s WACC is also commonly referred to as its “hurdle rate” for capital acquisitions.

Calculated CMC’s cost of financing (WACC). We assume that the nonprofit CMC can procure debt financing in the tax-exempt bond market at an interest rate of 6.3 percent, which includes, once again, the cost of selling new bonds through investment bankers. That rate would be equivalent to a rate of 9 percent on a comparable taxable bond if the typical purchaser of such bonds faced a marginal tax rate of 30 percent. It is worth noting that based on our assumptions, HCI’s after-tax cost of debt (calculated above as 5.85 percent) would actually be lower than CMC’s cost of borrowing via tax-exempt bonds, although that differential could go either way, depending on the marginal income tax rates that drive tax-exempt bond yields in the market. In any event, contrary to conventional wisdom, the ability of not-for-profit hospitals to borrow in the tax-exempt bond market actually does not bestow on them a significant economic advantage vis-à-vis the for-profit sector.

As a nonprofit entity, CMC cannot procure equity capital by selling ownership certificates (common stock) in the open market. Its equity capital comes from four other sources. First, it may be supplied voluntarily by philanthropists. Second, it may be supplied involuntarily by members of the community who, as patients, have directly or indirectly (through their insurance premiums) paid the hospital higher than break-even prices for services rendered. Although ostensibly nonprofit in orientation, many such institutions price their services to achieve an “excess of revenues over expenses,” the nonprofit nomenclature for “profits.” By law, however, the institutions may not distribute such profits to outsiders. Instead, they retain them as equity capital to finance either asset acquisitions or unrequited future community services. Third, a nonprofit’s equity capital is indirectly supplied by general taxpayers who must pay higher property and income taxes than they would have to pay if nonprofits were taxed on their property and profits just
as for-profit entities are. Finally, in some instances equity capital comes to the nonprofit through grants from governments or private foundations.

The question then arises, What annual cost should be assigned to the use of their equity capital by nonprofit institutions? As noted, unlike the shareholders of for-profit entities, those who supply equity capital to the nonprofit sector do not expect a monetary return for their voluntary or involuntary “investments” in that sector. Neither do they lie awake at night worrying over the financial risk (to them) from those “investments.” Instead, society expects the nonprofit sector to reward its suppliers of equity capital with purely psychic returns—with the knowledge that the nonprofits will provide to society certain valuable benefits for which they are not directly compensated with cash revenue. A core issue in the for-profit/nonprofit debate always has been how large these psychic benefits have to be and how their magnitude should be measured.

For the moment, we sidestep that difficult question by assuming that the equipment in question would be purchased by either hospital purely for commercial reasons. It would then seem logical to require that the proposed acquisition yield a sufficiently high stream of net cash operating income to cover the hospital’s cost of debt financing as well its opportunity cost of drawing down the hospital’s pool of liquid equity funds to finance this acquisition. That opportunity cost can be measured by the rate of return that CMC could have earned on these funds had they been invested in some broad common-stock portfolio—such as a mutual fund—rather than in this particular piece of equipment.11

It might be argued that the relevant opportunity cost of funds would be approximately equal to the for-profit HCI’s cost of equity capital (here 15 percent), because the shareholders of for-profit hospitals would be precisely the kind of mutual funds in which the nonprofit CMC might have parked its liquid equity funds. That may be so. Here we assume initially, however, that CMC’s opportunity cost of equity funds is a lower and safer 9 percent, although subsequently we repeat the analysis on the assumption that both hospitals have the identical cost of financing.12

To keep the illustration simple, we assume that in its financing CMC, too, seeks to maintain a debt-to-asset ratio of 40 percent over the long run. With an assumed cost of debt financing of 6.3 percent and a cost of equity capital of 9 percent, we can then calculate CMC’s WACC as k = 6.3(40%) + 9(60%), which comes to 7.92 percent. The rate implies that to break even on the proposed acquisition of the machine, CMC would have to earn an annual net cash operating income of at least $7.92 per $100 of financing devoted to the acquisition.

Relative Profitability Of The Acquisition

At a WACC of 11.34 percent, the NPV of the proposed acquisition from HCI’s perspective would be a negative $309,463, which means that HCI would not find the acquisition in its economic interest. Only at a WACC as low as 8.44 percent would HCI break even on this acquisition. That break-even hurdle rate (see the bottom row of Exhibit 1) is commonly known as the internal rate of return (IRR) of the acquisition.

By contrast, at CMC’s much lower WACC of 7.92 percent, the proposed acquisition would have a positive NPV of $495,097, which implies that the acquisition would be economically advantageous to CMC. CMC would lose economic value with this acquisition only if its WACC were to exceed 11.90 percent, the internal rate of return of the project from CMC’s perspective.

This difference in profitability is, of course, driven by both the tax preference enjoyed by
the nonprofit hospital and our assumption that it has a lower cost of equity financing than the for-profit hospital does. To isolate the tax effect strictly, it is useful to calculate NPV's for the two hospitals on the assumption that HCI's after-tax cost of debt is identical to CMC's tax-exempt cost of debt and that CMC's cost of equity capital is identical to HCI's cost of equity capital. On these assumptions, the two hospitals would have the identical WACC, which, for HCI, would be after taxes. Exhibit 2 shows the respective NPV's at different assumed, common WACCs. As shown in column 3 of the exhibits even if one imputed to the two hospitals the identical cost of financing, the not-for-profit CMC would always have a decided economic advantage over the for-profit HCI. That advantage would be strictly the present value of the income-tax preference enjoyed by CMC.

Break-Even Prices

When for-profit hospitals are found to charge higher prices for particular procedures than nonprofit hospitals in the same market area charge, that is sometimes interpreted as price gouging by the for-profit hospital. It may be so. On the other hand, as the preceding analysis shows, it also could be an attempt by the for-profit hospital to compensate for its relative economic disadvantage vis-à-vis its tax-favored, nonprofit competitors.

To gain some perspective on this point, I recast the preceding analysis to inquire what price per procedure each hospital would have to charge patients just to break even. At CMC's assumed cost of financing of 7.92 percent, that break-even price would be $666. At HCI's assumed higher cost of financing of 11.34 percent, that break-even price would be $737, or 10.7 percent higher than CMC's. HCI would have to charge that differential to cover its higher cost of financing and the income taxes that it must pay but from which the nonprofit CMC is exempt.

To isolate how much that differential would be attributable strictly to the income tax preference enjoyed by CMC, one would impute to both hospitals the identical WACC and then calculate the corresponding break-even prices (Exhibit 3). One can see that at any assumed WACC, the for-profit hospital would have to charge much higher prices merely to recoup its outlays on income taxes, a differential that rises with the assumed cost of financing. In reality, of course, for-profit hospitals pay not only income taxes but usually also higher property taxes than are paid by similarly situated nonprofit hospitals. These higher taxes, too, would have to be recouped by the for-profit with higher prices, other things being equal.

A variety of loopholes available to corporations can reduce the effective average tax rates they pay below the statutory rate of 35 percent. That circumstance, however, would alter the evaluation of a particular capital acquisition only if these loopholes also shielded the

<table>
<thead>
<tr>
<th>Assumed cost of financing</th>
<th>NPV from the for-profit HCI's perspective</th>
<th>NPV from the nonprofit CMC's perspective</th>
<th>Extra NPV earned by the nonprofit hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 percent</td>
<td>$50,538</td>
<td>$484,193</td>
<td>$433,655</td>
</tr>
<tr>
<td>9 percent</td>
<td>−63,000</td>
<td>351,341</td>
<td>414,341</td>
</tr>
<tr>
<td>10 percent</td>
<td>−171,493</td>
<td>224,603</td>
<td>396,095</td>
</tr>
<tr>
<td>11 percent</td>
<td>−275,228</td>
<td>103,622</td>
<td>378,850</td>
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<tr>
<td>12 percent</td>
<td>−374,476</td>
<td>−11,935</td>
<td>362,541</td>
</tr>
<tr>
<td>13 percent</td>
<td>−469,485</td>
<td>−122,377</td>
<td>347,108</td>
</tr>
<tr>
<td>14 percent</td>
<td>−560,490</td>
<td>−227,993</td>
<td>332,498</td>
</tr>
<tr>
<td>15 percent</td>
<td>−647,710</td>
<td>−329,052</td>
<td>318,658</td>
</tr>
</tbody>
</table>

**SOURCE:** Author's analysis.
net operating income on the incremental operating cash flow expected from that particular project. On the other hand, if one compares the overall economic advantage enjoyed by a nonprofit firm as a whole over a similarly situated for-profit firm as a whole, a lower effective average income-tax rate would narrow the nonprofit’s overall economic advantage over for-profit hospitals commensurately.

**Policy Implications**

If one accepts the common textbook proposition that, in principle, the social obligation of an investor-owned business firm is merely to maximize the wealth of its owners, without violating the laws of the land, then it follows that a for-profit hospital does not, in principle, owe society any unrequited community services of any kind.11 With that proposition as a baseline, the question then arises what extra benefits nonprofit hospitals owe society in return for the relative economic advantage society grants them vis-à-vis similarly situated for-profit hospitals. These benefits could take the form of unrequited community services or of lower prices than those charged by similarly situated for-profit hospitals for the same services. In thinking about this question, one should distinguish clearly between the various sources of that advantage.

**Cost of financing.** As noted earlier, the ability of nonprofit hospitals to raise debt in the tax-exempt bond market does not really bestow on them a significant economic advantage, because on an after-tax basis the cost of debt financing is roughly the same for nonprofit as it is for for-profit entities. Tax-exempt debt financing therefore does not call for compensation by the nonprofit hospital.

Matters are more complicated in connection with equity capital. Suppose a for-profit and a nonprofit hospital used the same total amount of capital assets and maintained the same debt/equity mix in financing those assets. Each therefore would have the same amount of equity capital invested in hospital assets.

Suppose the for-profit hospital earns for the suppliers of its equity capital an annual monetary return of $15 per $100 of that equity capital. That return does go to society at large, because the suppliers of the firm’s equity capital are members of society (although not necessarily members of the particular community in which the hospital is located). As noted earlier, that monetary return must cover the shareholders’ opportunity costs of investing their fund in a risk-free asset (for example, a U.S. Treasury bond), plus a premium for the risk the owners assume by entrusting their funds to this particular for-profit hospital.

Given this baseline, the question arises what returns the nonprofit hospital ought to achieve with the equity capital it has invested in its assets. Because the nonprofit hospital cannot distribute any profits to the suppliers of its equity capital, it can pay the expected returns in only two forms: either in enhanced retained profits, or in community benefits that are valued by society but for which society will not pay explicitly. It may be argued that to match the returns that the for-profit hospital earns for society at large on equity-

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**EXHIBIT 3**

<table>
<thead>
<tr>
<th>Break-Even Price Per Procedure For Two Hospitals, HCI And CMC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost of financing</strong></td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td>8 percent</td>
</tr>
<tr>
<td>10 percent</td>
</tr>
<tr>
<td>12 percent</td>
</tr>
<tr>
<td>14 percent</td>
</tr>
</tbody>
</table>

**SOURCE:** Author’s analysis.
financed assets, the sum of profits retained by the hospital and the monetary equivalent of the unrequited community benefits it provides the community should be equal to the monetary rate of return that for-profit hospitals earn for their suppliers of equity capital. On our assumptions in this illustration, that would be at least $15 per $100 of equity capital invested in assets. This argument would rely on the common-sense proposition that under an efficient allocation of society’s scarce resources, these resources should yield society roughly the same benefits per dollar of resource committed, regardless of their particular application.

That proposition, however, implicitly equates the estimated dollar value of the community benefits provided by nonprofit hospitals with the dollar returns earned by the shareholders of for-profit hospitals. To the extent that these distinct types of returns accrue to distinct groups in society, the proposition may abstract unduly from the incidence of these benefits. To many champions of the nonprofit sector, it will not be obvious that $100 worth of community benefits rendered to poor, uninsured patients can be equated with $100 worth of monetary benefits bestowed on the often wealthy shareholders of a business corporation. I, for one, have great sympathy with that argument, for economic efficiency ought never to be pursued blithely in abstraction from distributional effects. Taking into account distributional effects, however, makes determining the proper amount of community benefits owed by nonprofit hospitals an inherently political issue.

**Tax preference.** As was shown in the preceding analysis, there can be no doubt that the tax exemption enjoyed by not-for-profit hospitals is an economic advantage. It seems reasonable to argue that in return for this tax preference, nonprofit institutions owe society more uncompensated community benefits (or lower prices) than do for-profit hospitals, which, it can be said, “already gave at the tax office.”

Granted, implementation of the normative standard proposed here would be complex in practice. However, if it were accomplished, we probably would find that many nonprofits in our society already pass this standard with flying colors. Many others, however, might not. Be that as it may, a first practical step in extracting more formal accountability from the nonprofit sector for the tax advantages its members use might be to levy initially the same set of taxes on all for-profit and nonprofit corporate health care facilities. Both types of hospitals then could be allowed to treat as a dollar-for-dollar tax offset the auditable and certifiable monetary estimate of the value of uncompensated community benefits that they have rendered during a given fiscal period. The value of charity or uncompensated care, for example, could be set at rates established by Medicare. For other benefits the valuation would be more complex. It would be altogether healthy, however, to explore more formally just what the value of those community benefits rendered by nonprofit entities might be, and how many of them society wishes to purchase indirectly, through its tax system. It is difficult to see how anyone could object to this form of accountability in our democracy.
NOTES
4. Although depreciation expense is deducted from revenues in calculating accounting income, depreciation is a noncash expense calculated by accountants to allocate the cost of long-lived assets to several accounting periods. Depreciation expense enters a capital-budgeting analysis only insofar as it shields income from taxation, thereby preventing an outflow of cash to the government.
5. In this exercise we use the Modified Accelerated Cost Recovery System (MACRS) depreciation rates currently in use.
6. To illustrate, if the incremental cash operating income due one year after the acquisition were $1 million and the weighted average cost of capital (WACC) were 10 percent, then the present-value equivalent of that cash flow would be $1,000,000/1.10 = $909,090. If the corresponding cash flow three years hence were $1 million as well, its present-value equivalent would be $1,000,000/1.10^3 = $751,315.
7. Because of flotation costs, the cost of equity procured via newly issued stock certificates is actually slightly higher than the cost of equity capital procured simply by retaining earnings. We ignore that fine point here.
8. Issuing and selling new stock certificates involves flotation costs that are avoided when equity financing is procured through retained earnings. Therefore, in theory, the cost of retained earnings is somewhat lower than that of equity procured via a new stock issue. For the sake of simplicity, we ignore this fine point, as do many practitioners in the field.
9. The uncertainty surrounding the returns to shareholders can be broken down into two components: variability that is systematically related to general market conditions (the stock’s “systematic” risk), and variability unique to the firm in question (the stock’s “unsystematic” risk). It can be demonstrated with modern portfolio theory that a well-diversified portfolio of fifty stocks or more will eliminate from the investor’s perspective virtually the entire “unsystematic” risk inherent in common stocks. Thus, the risk for which an efficient stock market rewards the investor is only the “systematic,” market-related risk that cannot be eliminated through portfolio diversification. In practice, the magnitude of a stock’s “systematic risk” is measured empirically (and highly imperfectly) by the so-called beta coefficient of the stock.
11. See L.C. Gapenski, Understanding Health Care Financial Management (Ann Arbor, Mich.: AUPHA Press/Health Administration Press, 1993), chap. 8. By this reasoning, funds donated for and therefore restricted to a particular philanthropic purpose would have a zero cost of capital, because they do not have an opportunity cost.
12. The details of this analysis are available from the author at <reinhard@princeton.edu>.
13. Political constraints and public relations may nevertheless make it profitable for the for-profit hospital to be seen rendering some unrequired community benefits.
14. Although about half of American households now directly or indirectly own common stock, it is well known that the bulk of common stock in this country is owned by only a small minority of wealthy households. In this connection, see E.N. Wolff, “Why Stocks Won’t Save the Middle Class” (Unpublished paper, New York University, 25 March 1999).