Capital Structure Strategy in Health Care Systems

John R.C. Wheeler, Dean G. Smith, Howard L. Rivenson, and Kristin L. Reiter

The capital structures (the relative use of debt and equity to support assets) of leading health care systems are viewed as a strategic component of their financial plans. While not-for-profit hospitals as a group have maintained nearly constant levels of debt over the past decade, investor-owned hospitals and a group of leading health care systems have reduced their relative use of debt. Chief financial officers indicated that in addition to reducing debt because of less favorable reimbursement incentives, there was a focus on maintaining high bond ratings. Debt levels have not been reduced as sharply in these health care systems as they have in investor-owned hospitals, in part due to the use of debt to support investments in financial markets. Because these health care systems do not have easy access to equity, high bond ratings and solid investment earnings are central to their capital structure policies of preserving access to debt markets. Key words: capital, finance, integrated systems, strategy

This article investigates the capital structure policy and practice of not-for-profit (NFP) health care systems. The principal question addressed is whether such firms approach capital structure as a strategic opportunity to enhance the value of the organization, or view capital structure as a byproduct of other decisions. To the extent that NFP health care systems employ capital structure in a strategic manner, specific capital structure targets might be independent goals of these firms. To address this question, policies and practices of leading health care systems were examined. We investigated whether such organizations have capital structure targets, are generally able to achieve these targets, and, if they are unable to achieve targets, what the main impediments might be.

The most obvious goal of a capital structure policy is to reduce the overall cost of financing, thereby lowering the firm’s costs and enabling the firm to pursue more

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value-adding investments. The thesis of this article is that health care systems, especially those operated on a not-for-profit basis, approach capital structure strategically, but have limited options in their decision making. One limitation for NFP firms is that they cannot raise equity through the sale of stock to the public. Their equity sources are restricted to retained earnings from operations, income from investments, and donations. Given this limited access to equity, NFP firms have fewer options in altering capital structure to achieve an optimal mix of debt and equity. Hence, the financial managers of NFP health care organizations may in general employ a different strategy with respect to capital structure than investor-owned firms.

As health care policy and various kinds of market competition create more challenges for providers, the possibility that capital structure can be used strategically becomes increasingly important. One of the theses of this series of articles on leading health systems is that NFP health care provider organizations are relying on improved management of their financial positions to support challenges on the operating side. If they can continue to manage their financial affairs to make up for the shortcomings in their operations, then the likelihood of continuing financial viability is increased. But if these organizations experience difficulty in achieving their financial management goals, while at the same time failing to meet their operational goals, the future viability of these organizations will be severely challenged.

This article begins with a brief review of capital structure theory. This review begins with the notion of an "optimal" capital structure. An optimal capital structure is a unique mix of debt and equity that minimizes the overall cost of financing assets. Theory suggests that derivation of an optimal capital structure depends on the existence of financial market imperfections. We next consider the existence of financial market imperfections for NFP health care firms and the implications of changing financial market conditions on optimal capital structure. The article then reviews the history of the capital structure of hospitals (to investigate the conditions under which capital structure has changed in response to financial market conditions), with a focus on differences between investor-owned and NFP hospital firms. This investigation leads to some speculation as to the capital structure strategy of NFP health care firms, which is further explored through interviews with the chief financial officers (CFOs) of a dozen leading health care systems. The capital structure strategy of these CFOs is then compared with the capital structure of these organizations, based on a review of their financial statements. The article concludes with a discussion of the implications of the findings for the financial viability of NFP health care organizations.

**Capital Structure Theory**

Well-established finance theory, first articulated by Nobel laureates Modigliani and Miller, holds that the value of the firm depends on the character of the left side of its balance sheet (i.e., on its asset structure).\(^1\) Decisions about programs and the assets necessary to carry out those programs are the keys to strategic and financial success. In a world with perfect financial markets, the character of the right side of the balance sheet—its financial structure—does not
influence the value of the firm. Decisions about the mix of debt and equity employed to support the firm's assets are not relevant to the overall cost of financing. Hence, attempts to reduce the overall cost of financing, and thereby to increase the value of the firm by shifting the capital structure toward either more debt or more equity, will not be successful.

This theory applies under conditions of perfect capital markets (i.e., where there are no imperfections such as agency costs, bankruptcy costs, or subsidies that lower the cost of debt). Under such conditions, a firm's attempt to lower overall financing costs by shifting from relatively costly equity to relatively lower cost debt will be unsuccessful. Equity holders will see increasing risk to their returns associated with more debt, and they will penalize the firm by requiring higher rates of return on their investments—by forcing the firm to pay higher dividends. Alternatively, debt holders may impose higher interest charges or more restrictive covenants on the borrowing firm, which have costs as well. The increase in required dividends, interest rates, or the cost of covenants will be just sufficient to cancel out gains associated with using relatively cheap debt, so that the overall cost of financing stays constant. The firm can do nothing to alter capital structure that will reduce (or increase) financing cost. Capital structure therefore has no influence on the value of the firm. The notion of a capital structure strategy to minimize overall financing costs makes no sense.

**Finding the optimal capital structure for the firm becomes a search for important financial market imperfections.**

on the nature of financial market imperfections faced by the firm. Finding the optimal capital structure for the firm therefore becomes a search for important financial market imperfections. There is a variety of financial market imperfections likely to be relevant to the NFP health care firm. The most important imperfections are probably access to subsidized debt, restricted access to equity markets, and the existence of significant transactions costs associated with financial distress.

Subsidized debt can come in many forms. For the typical tax-paying firm, the income tax deductibility of debt interest payments is a significant subsidy supporting the use of debt, the magnitude of which depends on the marginal tax rate of the firm. Whereas debt is only taxed once (as income to the individual), dividends are taxed twice (as income to the individual and as income to the firm).

NFP firms usually do not pay income taxes, and hence do not face this income tax subsidy. Instead, many NFP firms, including many hospitals and some nursing homes, have access to the tax-exempt debt markets. They can borrow at lower rates than firms without such access (i.e., tax-paying firms), because their bondholders do not have to pay income taxes on the interest payments they receive. The magnitude of advantage to the bondholder that results from this tax exemption can vary from

**The Search for Market Imperfections**

Whether altering capital structure can influence the overall cost of financing depends
0 to 39 percent or more depending on the bondholder's combined federal, state, and local tax rates. Accounting for the risk of the bond, the rate differential in efficient markets will reflect the average bondholder’s tax rates. This subsidy is significant, and it is supported by the observation that nearly all of the new debt for NFP hospital firms is tax exempt.

Wedig et al. note that use of tax-exempt debt by NFP firms is analogous to the income tax deductibility of interest expense for investor-owned firms.4 They argue that the availability of this debt subsidy has caused NFP firms to establish a target capital structure that includes more debt than would be the case without this subsidy. This observation is consistent with hospitals taking advantage of a market imperfection to alter capital structure to minimize the costs of financing assets.

There is another debt subsidy that has existed for NFP hospital and nursing home firms for decades. With the institution of Medicare and Medicaid in 1965, such firms have been able to pass along the interest expense on debt to the government in proportion to Medicare and Medicaid patient volumes. Some large private insurers, notably the Blue Cross plans in several states, had a similar policy. This subsidy reduced the cost of debt to borrowing firms with large Medicare and Medicaid volumes to near zero. Empirical research has demonstrated that hospitals with a higher percentage of cost-based reimbursement for interest expense have tended to employ higher debt financing ratios.5 Ligon6 and Trigeorgis7 developed theoretical models to support these empirical results. Medicare began phasing out this so-called capital cost pass-through in 1990, and other payers began to follow suit. This source of debt subsidy is now nearly eliminated; thus, the net cost of debt to hospital firms has risen significantly.

The fact that debt was heavily subsidized historically implies that hospitals have had an opportunity to use high levels of debt to lower overall financing costs. Likewise, the fact that this subsidy has diminished over the last decade implies the opportunity is less valuable today than it was 10 years ago.

A second market imperfection is that NFP firms have restricted access to equity markets. Non-investor-owned firms, by definition, cannot issue stock or other forms of equity to investors. Instead, NFP firms acquire equity through donations, philanthropy, government grants, and earnings from operating and non-operating activities. NFP firms spend substantial sums on fund-raising activities, which is evidence of the importance of equity, even if the amounts actually received tend to be small as a percentage of total financing.8 Further, NFP hospitals often view their communities as investors and provide community benefits that are akin to dividends.9 Although the same relationship does not exist between community benefits and donations as between dividends and common stock, there is still a positive relationship supporting the notion of communities as equity holders, albeit at a higher cost than for investor-owned firms.10

A final market imperfection potentially relevant to the identification of an optimal capital structure is the existence of costs associated with financial distress. In perfect capital markets, these costs are nonexistent. If a borrower experiences financial distress and moves into bankruptcy, the assets are fully available to compensate creditors and equity investors. In practice, bankruptcy
imposes considerable transactions costs on the firm and its financial sources; a large share of asset value is consumed in the process. Further, for most organizations, and especially for health care organizations, asset value is considerably higher as part of a going concern than the individual asset components. A hospital room has very little value in an alternative use; converting a hospital into an office building can be done only at a high transaction cost. The existence of substantial bankruptcy costs means that lenders must be compensated for the additional risk associated with the likelihood of financial distress. As the business risk faced by the firm increases, the risk premium associated with debt increases even more.

Financial Market Imperfections and Optimal Capital Structure

This review of capital structure theory demonstrates the importance of financial market conditions, specifically market imperfections, in influencing capital structure strategy. The relations discussed above can be summarized as follows. To the extent debt is subsidized by (1) having access to tax-exempt debt financing, (2) the tax deductibility of interest expense, and (3) cost-based reimbursement for interest expense, the firm ought to use more debt and less equity in its capital structure. Further, a high cost of acquiring equity through the provision of community benefits and other fund-raising efforts will reduce the relative amount of equity on the balance sheet. Use of more debt, up to a point, will reduce the firm’s overall cost of financing. Conversely, to the extent that the firm faces a high level of business risk, and thereby exposes investors to significant risk of financial distress, it should have less debt and more equity in its capital structure.

In recent years the nature of financial market conditions facing the health care firm has shifted in important ways. Most obviously, the prevalence of cost-based reimbursement for interest expense has greatly diminished. Access to tax-exempt financing is under challenge from some quarters, notably some state and local governments and the investor-owned sector. Continued access to this subsidy is likely to depend on demonstrated creation of social value by the NFP organization. Perhaps less obvious is the increased business risk experienced by health care providers and health plans. This heightened business risk is due to reduced and irregular support for health care on the part of both the public and private purchasers of services. Over the past two decades new payment systems have placed providers increasingly at risk for financial losses associated with factors both within and outside of their immediate control.

Higher business risk, combined with lower subsidies to debt, suggests that the optimal capital structure of the health care organization has shifted toward equity and away from debt. If health care firms are recognizing these changes and approaching the capital structure decision from the perspective of minimizing overall financing cost, we would expect to see them employing less leverage. If, however, they have some other strategic purpose for capital structure, we might expect to see a different result.

The optimal capital structure of the health care organization has shifted toward equity and away from debt.
The History of Capital Structure of Hospitals

Figure 1 depicts trends in the average capital structure of NFP and investor-owned hospital firms over the most recent decade for which comparative, aggregate data are available. Capital structure is measured as the ratio of long-term debt to total long-term financing (long-term debt plus equity). During the late 1980s and early 1990s, investor-owned (IO) firms were highly leveraged. This use of high levels of debt was consistent with the prevalence of significant subsidies to debt, especially cost-based reimbursement of interest expense. As described above this subsidy began to diminish about 1990, precisely the year that IO firms began to reduce their use of financial leverage. By the late 1990s, IO firms had, on average, cut their debt to capitalization ratios down to 25 percent, from a peak of nearly 80 percent in 1990.

During this period, the business risk facing health care firms was increasing significantly, as argued above. Figure 1 presents a picture consistent with our expectations that IO health care firms were responding to changing financial market conditions by shifting capital structure toward equity and away from debt. Their behavior is consistent with a capital structure strategy that focuses on minimizing overall cost of financing.

In sharp contrast, the average capital structure of NFP hospital firms has been remarkably stable over the past decade. The long-term debt to capitalization ratio has remained at about 40 percent, while financial market conditions implied a shift to less leverage was advantageous. Why have the financial managers of NFP hospitals not shifted capital structure substantially in response to changes in financial constraints? Are they not thinking strategically about capital structure? Do they have constraints on debt or equity that inhibit changes in capital
structure for such a long period of time? Or, do they have a strategy other than the traditional one of minimizing overall capital structure?

The Capital Structure Strategy of Leading Integrated Health Care Systems

To get a better understanding of the capital structure strategy, we conducted interviews with CFOs of a dozen leading integrated health care organizations across the country. We inquired whether these systems had established optimal or target mixes of debt and equity. This question was followed by a series of questions designed to determine how the target capital structure was determined. All CFOs said they had a target capital structure. Figure 2 displays the responses of the 11 organizations that gave us a specific numerical target. The figure also shows the actual ratio of debt to assets of the participating health care systems.

Figure 2 indicates that the highest leverage target is 50 percent. All but two of these hospital firms established targets at below the median debt to capitalization level of AA-rated hospitals. Most of the targets (7 of the 11) are in the range of 34 percent to 40 percent, well below the median for AA-rated organizations. Further, most of the organizations have targets below current debt levels (7 of the 11), although some (4 of 11) have targets at or above their current debt levels.

Reasons given for these low leverage targets are informative. Many CFOs cited a goal of securing or maintaining an AA bond rating as the main reason for keeping debt financing relatively low. Others said their target debt rating was A or A–. Several noted that maintaining other closely related financial ratios was crucial to achieving their target bond rating. Three of these closely related ratios were:

1. Cash-to-debt ratio. One firm has a target of 1.0; another firm has a target of 0.5.
2. *Days' cash on hand.* Several firms noted targets in excess of 150 days. (See the article in this issue by Rivenson et al. titled “Cash Management in Health Care Systems.”)

3. *Debt service coverage.* One firm has a target of 3; another has a target of 5.

In pointing out the importance of keeping these ratios at target levels, several CFOs noted key relationships among them. The tradeoff between the goal to keep debt low and the goal of maintaining a large stock of cash was mentioned multiple times. One CFO used the phrase “borrow to save.” Another noted that, “more leverage helps you hoard cash.” The goal of maintaining large stocks of cash came through clearly from all organizations, and several noted that judicious use of debt was one key to cash stock maintenance. We will return to this point later.

Some of the respondent organizations are finding it difficult to maintain reasonable levels of profitability in the face of cutbacks in payment rates from public and private payers. These organizations are paying particular attention to capital structure and related key financial measures. One CFO made this point clearly: “We have an AA balance sheet, and a B income statement. So, we have an A- credit rating.”

The focus on bond ratings by these CFOs cannot be overstated. Virtually all CFOs said a high bond rating was central to their capital structure policies. This finding is hardly surprising. However, it is important to recognize that access to debt financing on good terms is more important to the financial viability of the NFP organization than it is to the IO firm, due to the latter's access to equity capital. Hence, NFP organizations pay closer attention to bond ratings. In his survey of Florida hospital CFOs, Gapenski found that NFP CFOs assigned a higher importance to maintaining a high debt rating than investor-owned CFOs did.\(^\text{11}\)

To probe further the relation between capital structure policy and the financial market imperfections noted earlier in this article, we asked specifically how, when targeting a mix of debt and equity, the benefits of tax-exempt debt were weighed against the risks and costs of financial distress. Three CFOs were quite explicit regarding financial distress. One noted the importance of keeping debt service low to be able to weather an industry downturn. Another CFO keeps debt low so as to maintain debt capacity for the future and be “able to handle three disasters per year.” A third said his organization’s goal was to keep debt low now “because of the higher level of business risk facing our organization.”

Other CFOs were more strongly motivated by the leverage opportunities of using cheap debt. Several made a point of the low cost of debt. These organizations were less concerned with potential financial distress than they were with balancing the desire to use cheap debt now with the goal of maintaining access to cheap debt in the future. One uses debt as much as possible: “Why use cash (which can be invested at 18%), when you can use debt?” But this respondent also stressed the importance of increasing debt capacity. This respondent boldly articulated a strategy followed by several organizations: Take advantage of the positive arbitrage opportunities presented by the combination of access to subsidized debt and recent high rates of return on financial investments. This strategy is the subject of a companion article (see the previously mentioned article by Rivenson et al. in this series), and it is
treated in depth there. But it is important to note here that one of the key issues defining capital structure strategy for NFP health care organizations is this positive arbitrage opportunity. The organizations we interviewed are establishing capital structure targets both to use debt as a way to support investments in financial markets currently and to ensure access to debt on good terms for the same purpose in the future.

Wedig stressed the importance of considering optimal NFP capital structure in a dynamic sense, in addition to a static sense. His argument goes as follows: Because NFP organizations cannot sell stock to increase equity financing, they are motivated to preserve equity, and hence access to debt in the future. This motivation may cause them to maintain equity financing ratios above what would appear to be optimal in a short-run sense. The observation that NFP hospitals have used substantially less debt than investor-owned hospitals historically is consistent with this argument. Several of our CFOs noted that concern for future access to debt motivated them to maintain relatively low levels of leverage currently. Also, the uncertainty of future reimbursement makes it prudent not to take on fixed-debt service obligations for the long term.

The CFOs of nearly half of the leading health care firms in our study mentioned that they were having difficulty achieving their capital structure targets. As indicated in Figure 2, seven of the firms have debt financing ratios above their target levels. Three CFOs indicated their firms were as much as 10 percentage points above desired debt to capitalization rates. Two others mentioned that they were experiencing unwanted deterioration in debt financing.

These comparisons must be considered in light of what has been happening to the actual capital structures of these leading organizations over time. Figure 3 displays the median debt financing ratios of the participating

![Graph: Median Debt to Assets vs. Year]

**Figure 3.** Trend in capital structure in study systems.
hospital firms for 1994 through 1998. There is a clear trend toward lower leverage. This trend also holds for the mean debt financing ratios.

The trend toward lower levels of debt financing among these leading organizations is not inconsistent with their inability to meet target leverage ratios. Several CFOs noted they were setting lower debt targets than in the past. A common objective is to maintain high levels of equity. NFP organizations have historically built equity mainly by making profits on patient care. Because of the cutbacks in payment rates discussed above, opportunities to increase equity from this source have diminished for many hospital firms, particularly in certain sections of the country. In fact, there are several prominent hospital firms that are experiencing reductions in equity because of severe losses on patient care. Several of our participating organizations are anticipating difficulties in this regard and have established capital structure strategies designed to preserve equity and access to debt in the future. These organizations were less likely to embrace a strategy of borrowing to take advantage of financial leverage.

Discussion

The aggregate data indicate that, on average, investor-owned hospital firms have responded to changes in financial conditions by altering their capital structure in a way likely to reduce the overall use of debt. In sharp contrast, NFP hospital firms have, on average, maintained a very stable capital structure, even as financial conditions they face have changed in important ways. Our interviews with the CFOs of leading NFP health care firms provided information on the approach these firms take to capital structure policy. The main finding is that minimizing overall cost of financing is generally not a direct goal of these organizations. Rather, most of these firms have developed a capital structure strategy focused on taking advantage of cheap debt to maintain cash stocks and support financial investments and on maintaining access to debt markets in the future on good terms.

To be sure, the maintenance of debt market access is closely related to pursuing a goal of minimizing overall financing costs. However, there is an important difference between NFP and IO firms that affects strategic emphasis. IO firms can alter capital structure relatively easily; if it is in their interest to use relatively less debt (as it appears to have been in the past decade); they can sell stock and retire debt. Put another way, IO firms must maintain access to both equity and debt markets. By so doing they can achieve a target capital structure. NFP firms cannot similarly increase equity. They have a difficult time reducing financial leverage. Hence, even in periods when the use of debt is advantageous, as it was during the 1980s due to low business risk and large debt subsidies, NFP health care firms maintained relatively high equity financing ratios. It is likely they did so knowing that this equity, and the related access to debt markets, would prove valuable (and would be irreplaceable) sometime later. Further, as the relative cost of debt has increased over the past decade, NFP hospital firms have had difficulty shifting their financial structures toward equity.

Our study suggests that NFP health care organizations have a particular approach to capital structure strategy that is different from that of most investor-owned
organizations. The organizations in our study have had reasonable success in pursing their strategies, because they are well managed and enjoy leading market positions. However, even some of these firms are experiencing increasing difficulty achieving their capital structure targets. If the health care markets in which these and other NFP hospital firms operate continue to deteriorate, capital structure strategy may need to be reconsidered.

Capital structure strategy and the overall cost of financing have clear implications for decisions about the deployment of assets. These relationships are explored in a companion article in this series (see “Capital Investment Strategies in Health Care Systems” by Reiter et al.).

REFERENCES


