Does Governance Matter? Board Configuration and Performance in Not-for-Profit Hospitals

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As performance accountabilities, external oversight, and market competition among not-for-profit (NFP) hospitals have grown, governing boards have been given a more central leadership role. This article examines these boards' effectiveness, particularly how their configuration influenced a range of performance outcomes in NFP community hospitals. Results indicate that hospitals governed by boards using a corporate governance model, versus hospitals governed by philanthropic-style boards, were likely to be more efficient and have more admissions and a larger share of the local market. Occupancy and cash flow were generally unrelated to hospitals' governing board configuration. However, effects of governance configuration were more pronounced in freestanding and public NFP hospitals compared with system-affiliated and private NFP hospitals, respectively.

Keywords: Governance, not-for-profit hospitals, performance.

THE FUNDAMENTAL FIDUCIARY DUTY OF THE governing boards of not-for-profit (NFP) hospitals is to ensure the organization's fidelity to its core mission. Because this broad charge has been subject to different interpretations by the legal system, regulators, and the boards themselves, it has led to wide variation in how hospitals' governance responsibilities are discharged and their boards are structured (Alexander, Weiner, and Bogue 2001). Such loose interpretations of "good" governance were tolerable in an era when hospital boards and the hospitals they governed were not held

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rigorously to account for their performance. But current conditions are likely to be less tolerant of ineffective governance, especially as boards attempt to balance the complex and often divergent demands of regulations, market forces, community expectations, and various organizational stakeholders (Alexander 2004; Carver 1997; Robilotti and Rosner 2004).

Several recent developments highlight the importance of effective governance to NFP hospitals. In the past decade, the tax-exempt status of NFP hospitals has increasingly been challenged, as political and community leaders try to hold these hospitals accountable for their community benefit responsibilities (Burns 2004; Lee, Chen, and Weiner 2004; Owens 2005). For example, nineteen states have enacted laws requiring NFP hospitals to report on their community benefit activities and/or to provide charity services linked to community needs (Catholic Health Association 2006). NFP hospitals also are faced with changing payment mechanisms, including a movement toward pay-for-performance that has been strongly endorsed by the Bush administration (Rosenthal et al. 2005).

In addition, the trend toward external oversight of hospitals' board structure and conduct has been escalating, particularly after the Sarbanes-Oxley Act was passed in 2002 (Greene 2005; Hymowitz 2005). Although this act applies only to investor-owned corporations, it has affected the board practices of various NFP organizations. For example, in response to alleged financial mismanagement by hospital executives, a proposed bill in Rhode Island (RI SB 2745) is attempting to lead the state toward greater transparency in health care public reporting. The IRS also has announced the development of its 2006 Exempt Organizations Implementing Guidelines, which signal its increased attention to the behavior of NFP hospitals (Internal Revenue Service 2005).

Greater external regulation/oversight of nonprofit board practices and market performance pressure on NFP hospitals will likely pressure NFP boards to produce "results." Amid these heightened expectations, however, is concern whether governing boards are prepared to assume these added responsibilities and take the lead in improving NFP hospitals' performance (Golden and Zajac 2001; Orlikoff 2005). The governance structure and practice of NFP hospitals appear to vary a great deal across the United States, with some boards emphasizing or interpreting their roles differently than others (Orlikoff 2005; Weil 2003). More important, there has been little empirical study of what constitutes effective

governance for nonprofit organizations and thus little evidence that would provide a basis for improving NFP hospitals' governance practices.

This article uses a conceptual model of NFP hospital governance archetypes to investigate the relationship between governance configuration and a set of "scorecard" indicators of hospital performance. Because the health care field is being pressured to produce results in several performance domains, it is important to identify those governance practices in hospitals that promote organizational viability and performance. Only in this manner can the best practices for NFP hospital governance be specified. These results will also help inform the specification of externally imposed standards on NFP hospital governance in order to fit such standards to these organizations.

Background

By far the most widely discussed topic in the NFP hospital governance literature is board effectiveness. This literature tends to be dominated by prescriptive or normative recommendations for changes in governance process, composition, and functions based on the "hands-on experience" of either hospital managers or consultants or both (Nadler 2004; Orlikoff 2005). Other authors have proposed theoretical models of effective governance (Green and Griesinger 1996; Herman and Renz 2004; Pointer and Orlikoff 2002). Unfortunately, however, neither the prescriptive nor the theoretical work has received much rigorous and systematic empirical verification. Furthermore, the few empirical studies in this area have produced incomplete or inconclusive results regarding the influence of governance characteristics on performance (Prybil et al. 2005).

The lack of conclusive evidence can be traced to fundamental disagreements over the strategic role of governing boards (Dalton and Dalton 2005). For example, some observers view boards as ineffectual in organizational decisions because they serve only as links to the external environment, acquiring resources and playing legitimacy-enhancing, rather than strategic, roles in organizations (Pfeffer 1972; Westphal and Zajac 1998). Others suggest that boards offer internal oversight by monitoring management's performance, checking managerial opportunism, and ensuring the consideration of stakeholders' interests (Barnard 1991; Coffee 1994; Jensen 1989; Kosnik 1987). According to this view, hospital boards influence organizational performance only in crisis conditions

or indirectly through the selection or termination of management. Finally, some observers maintain that boards exercise independent control over strategic change through their role as policymakers, ratifiers, or advisers to top management (Baysinger and Hoskisson 1990; Baysinger, Kosnik, and Turk 1991; Davis and Thompson 1994; Finkelstein and Hambrick 1996). Empirically, these wide-ranging viewpoints have led to differences in both the characteristics of boards considered to be important drivers of hospital performance (e.g., insider versus outsider representation) and the indicators of performance relevant to those characteristics (e.g., financial measures, community benefit, market share).

In sum, the main difficulty of assessing the relationship between governance and hospital performance is the ambiguity of the board's role and the general functions of governance. This ambiguity is even more acute for nonprofit boards, which must meet the needs of various stakeholders when carrying out the organization's mission. In practice, the authority and responsibility of hospital governing boards in internal decision making are badly defined. The boards of some NFP hospitals are active in policy and program development, but other boards perform largely ceremonial functions, delegating or abdicating much decision-making authority to the chief executive officer, to the medical staff, or to one or two very active board members (Morlock, Nathanson, and Alexander 1988; Prybil 1980). Accordingly, to evaluate the role of governance in NFP hospital performance, we must identify a model that conceptualizes and measures differences in the roles and behaviors of NFP hospital boards.

Philanthropic and Corporate Models of Hospital Governance

Increasingly, organizational scholars view organizations and, by extension, governing boards as a configuration of interconnected components rather than a set of independent elements separate from one another (Meyer, Tsui, and Hinings 1993; Rediker and Seth 1995). Organization configurations have a thematic focus and a close alignment of elements serving that focus. Using the configuration logic, over the past two decades, the health care literature has distinguished between the corporate model and the philanthropic model as two ideal types of hospital governance (Alexander, Morlock, and Gifford 1988; Delbecq and Gill

TABLE 1
Philanthropic and Corporate Models of Hospital Governing Boards

Philanthropic Model	Corporate Model
Large board size	Small board size
Wide range of perspectives and backgrounds	Narrow, more focused perspectives/backgrounds
Small number of inside directors	Large number of inside directors
Little management participation on board	Active management participation on board
No formal management accountability to board	Direct management accountability to board
No limit to consecutive terms for board members	Limit to consecutive terms for board members
No compensation for board service	Compensation provided for board service
Emphasis on asset preservation	Emphasis on strategic activity

Source: J.A. Alexander, L.L. Morlock, and B.D. Gifford, The Effects of Corporate Restructuring on Hospital Policymaking, *Health Services Research* 23 (2)(1988):311.

1988; Shortell 1989; Weiner and Alexander 1993). Table 1 describes the attributes characterizing and differentiating these models.

Each model reflects distinctly different values and organizing principles. The philanthropic model stresses community participation, due process, and stewardship, whereas the corporate model stresses strategy development, risk taking, and competitive positioning. These different values are supported and reinforced by configurations of governance attributes. For example, the philanthropic model's large size, diverse membership, and absence of term limits support and reinforce the inclusion of a broad range of perspectives and the continuity of institutional values and traditions. By contrast, the corporate model's small size, narrow membership, and use of term limits support and reinforce a streamlined, focused, strategic decision-making process. Each model therefore displays logical and functional interdependencies that are not adequately captured by focusing on a single feature of governance (e.g., insider representation) or by looking at multiple governance attributes independently of one another (Weiner and Alexander 1993).

Governance scholars suggest that the corporate board model is more strategically adaptive due to its smaller size, streamlined decision-making structure, and greater integration with management

(Delbecq and Gill 1988; Kovner 1990; Shortell 1989). In comparison with the philanthropic board model, corporate boards may also be more risk aggressive and growth oriented and therefore be more likely to initiate far-reaching organizational changes (Fennell and Alexander 1989). These claims have been empirically tested and indicate that hospitals with a corporate model of governance responded more rapidly to changing environmental conditions through strategies such as merger, acquisition, diversification, and multihospital system affiliation (Alexander et al. 2006). Less explored, however, is the impact of the hospital's governing board configuration on its performance.

Hospital Governance Configurations and Organizational Performance

We argue that different governing board configurations will be related to differences in the performance of NFP hospitals. This proposition is consistent with the configurational view of organizations, which maintains that there is complementarity among structure, strategy, and performance. Furthermore, we expect the relationship between the board's configuration and performance to hold after controlling for other structural and environmental variables (e.g., hospital size, location, market structure).

Specifically, philanthropic-model boards are likely to act like boards of trustees, concerned primarily with preserving the assets of NFP hospitals and acting as fiduciary agents for the community rather than instruments of hospital strategy. Because of their focus on asset preservation and lack of strategic orientation, we believe that philanthropic-model boards will be less responsive to competitive pressures and less prone to develop strategies leading to positive performance. Corporate-model boards, in contrast, are more likely to emphasize establishing overall policy direction (Alexander, Morlock, and Gifford 1988; Ritvo 1980). They are more likely to be concerned with the hospital's competitive position and with facilitating changes to enhance the hospital's operational efficiency, market standing, and financial viability. Accordingly, we expect the corporate-model board to have a higher probability of positively influencing the hospital's performance across a number of domains.

Methods

We employed a longitudinal design with pooled cross-sectional data to test the hypotheses (Menard 1991). The data were pooled from two hospital governance surveys conducted in 1985 and 1989, including observations for three groups of NFP community hospitals. The first group was NFP hospitals that responded to both the 1985 and 1989 governance surveys ($n = 1{,}907$); the second group contained NFP hospitals responding to the 1985 governance survey only ($n = 1{,}043$); and the third group was NFP hospitals responding to the 1989 governance survey only ($n = 950$). Inclusion of all three groups of hospitals, despite their varying presence during the study period, maximized the amount of information we used in this study. Our analysis used indicators of governance configuration in 1985 and 1989, along with the hospitals' organizational and environmental characteristics and baseline performance, to explain the average performance of hospitals between 1986 and 1989 and between 1990 and 1993, respectively. The controls for organizational and environmental variables and the use of the lag structure that established the temporal order of the predictors and the dependent variable helped enhance the causal tests of the hypotheses.

Data

The two surveys on hospital governance were conducted by the American Hospital Association's (AHA) Hospital Research and Educational Trust. The survey was sent to the CEOs of all U.S. community hospitals, who were asked to complete the questionnaire in collaboration with key board members (e.g., board chairperson). The response rates to the two surveys were approximately equal at 57 percent, although fewer responded in both data collection periods. We also used three other sources of data. The Area Resources File (Bureau of Health Professions) provided annual data on county-level demographic, health care resource, and economic characteristics. The AHA Annual Survey of Hospitals (1985–1994) supplied information about hospital size, system membership, and ownership type. The Medicare cost reports (1985–1994) were the source of data for the hospitals' financial performance.

To assess representativeness of the study sample, we used t- and chi-square tests to compare the sample with the populations of NFP

community hospitals in 1985 and 1989 on the basis of size (based on the number of beds), affiliation with a multihospital system, teaching status, and rural/urban location. The results showed that the sample was comparable to the NFP hospital population on teaching status and rural/urban location. However, large hospitals and hospitals with no affiliation with a multihospital system were overrepresented in the sample, so our research findings should be generalized with caution to the entire NFP community hospital population.

Given the changes in the health care environment over the last two decades, the age of the data and the limitations this places on the current application of our research findings are a concern. Nonetheless, our goal was to test a theoretically based model that explains the relationship between a hospital's board configuration and its performance. This governance model and the performance measures we used are not specific to a particular period.

Measures

Hospital Performance. We assessed five indicators of operational, strategic, and financial performance: efficiency, occupancy, adjusted admissions, market share, and cash flow. Efficiency was defined as the ratio of total expenses ($1000s) to statistical beds. Occupancy meant the ratio of average daily census to statistical beds. Adjusted admissions were the sum of inpatient admissions and equivalent admissions attributed to outpatient services. This adjustment was necessary in order to standardize the assessment of performance among NFP hospitals that differed in their strategic emphasis on inpatient and outpatient care. Market share indicated the percentage of total adjusted admissions in the county attributable to the focal NFP hospital. Cash flow, an important indicator of NFP hospitals' short- and long-term development and survival, was calculated as the ratio of net assets and depreciation to total assets.

To smooth out unavoidable short-term variations in hospital performance, we constructed all the operational and financial performance indicators as an average over a four-year period. A one-year lag was created to ensure that all predictors, including governance configuration (the main predictor of interest), preceded the performance indicators. In other words, we used the predictors in 1985 to explain the differences in sample hospitals' average performance between 1986 and 1989 and the predictors in 1989 to explain differences in average performance between 1990 and 1993.

Several of the performance indicators, such as adjusted admissions and market share, were significantly influenced by the size of the hospital. For example, larger hospitals, with more hospital beds and higher staffing levels, were more likely to admit and treat more patients than were smaller hospitals. Accordingly, a variable indicating hospital bed size was incorporated in the model to control for differences in hospital size.

Governance Configuration. The main predictor was governance configuration—an interval variable that measured the *degree* to which a NFP hospital's governing board conformed to the corporate model of governance. We used profile analysis to assess the degree of similarity between an NFP hospital's board and the corporate model (Doty, Glick, and Huber 1993; Drazin and Van de Ven 1985; Young, Beekun, and Ginn 1992). Like cluster analysis and other taxonomic procedures, profile analysis captures the integrated conception of governance expressed in the corporate-philanthropic governance typology. Experts prefer profile analytic techniques for modeling organizational typologies because the analytic approach is more consistent with the logical structure of typological theories (Doty and Glick 1994; Doty, Glick, and Huber 1993). In contrast to taxonomic analysis, profile analysis models ideal types as organizational forms that might exist rather than as categories of organizations that actually exist. Thus, we treated ideal types like the corporate governance model as theoretical constructs rather than empirical descriptions of boards.

Measuring the corporate governance configuration through profile analysis was accomplished through two sequential steps. First, we constructed an ideal profile of the corporate model through close study of the literature. We obtained theoretically specified values from the literature for six of the eight characteristics of the corporate model shown in table 1 (Doty and Glick 1994; Doty, Glick, and Huber 1993). We measured five characteristics on a binary scale and set them equal to one to reflect the attributes of the corporate model: CEO role on the board, formal CEO evaluation, board member term limits, board member compensation, and focus on strategic activity (see appendix for descriptions of these items). In the case of board size, the health care literature suggests seven as the ideal size for a corporate-model board (Delbecq and Gill 1988; Shortell 1989). While the literature provided theoretical justification for distinguishing corporate and philanthropic models in regard to insider representation and occupational heterogeneity, it did not identify optimal levels or values for these continuous variables. Therefore, we set the profile values for these characteristics to be equal to the mean scores

reflected in a sample of hospitals scoring in the first percentile for the corporate ideal type for the six theoretically specified board attributes (cf. Drazin and Van de Ven 1985; Venkatraman and Prescott 1990). This strategy for obtaining empirically specified profile values maximized the advantages of the theoretical approach to multivariate profile construction (Doty and Glick 1994). The values were 0.14 for insider representation and 0.27 for occupational diversity.

In the second step, we assessed the similarity of an NFP hospital's governance configuration to the quantitative profile of the corporate model by computing Gower's coefficient.[1] We used Gower's coefficient instead of the more familiar Euclidean distance coefficient because we measured the board characteristics on binary, ratio, and interval scales. Gower's coefficient permits the use of variables on different measurement scales in the estimation of similarity (Kaufman and Rousseeuw 1990).

Board attributes were equally weighted, since the literature did not offer a compelling rationale for differentially weighting board characteristics. With the computation of Gower's coefficient, each NFP hospital received a value from zero to one, indicating the degree to which its governance configuration resembled the profile for the corporate model. Heuristically, Gower's coefficient of similarity can be interpreted like a Pearson correlation coefficient. A higher value of the Gower's coefficient indicates greater resemblance of the hospital board's governance configuration to the corporate model.

Organizational and Environmental Conditions. We incorporated in the analysis five organizational control variables (size, ownership, teaching status, system affiliation, and institutional ties with accrediting organizations, national associations, and insurance groups) and three environmental control variables (rural location, market competition, and per capita income). Studies showed that these covariates were correlated with both governance structure and performance in hospitals (Alexander and Amburgey 1987; Gautam and Goodstein 1996; Goodstein and Boeker 1991; Halpern, Alexander, and Fennell 1992; Lee and Alexander 1999), so we included these covariates to account for alternative explanations of the relationship between governance configuration and performance. Hospital size (in 100s) was measured by the number of hospital beds set up and staffed. Ownership was represented by one dummy variable—public NFP—with the private NFP serving as the reference category. Teaching status was measured according to whether or not the hospital provided an internship or residency training program (1 if the hospital

did and 0 otherwise). System affiliation indicated whether the hospital was a member of a multihospital system (1 yes and 0 no). Institutional ties measured the number of the hospital's affiliations with well-known accrediting organizations, national associations, and insurance groups.

Rural location was measured according to whether the hospital was located in a nonmetropolitan county. Using a county-based market definition, market competition was measured by 1 minus the Herfindahl index (the sum of the squared market share of all community hospitals in the county) (Phibbs and Robinson 1993). A higher value of this variable indicated that the market was less concentrated and more competitive. Per capita income (in $10Ks) was the average income of county residents.

Finally, we included in the model the baseline hospital performances in 1985 and 1989 in order to reduce potential endogeneity in the analysis (i.e., the structure of hospital governance may change as a result of anticipated performance downturns). The indicator of baseline performance in each model was measured as the dependent variable in that model for the baseline year. For example, occupancy in 1985 was included in the model that predicted the average occupancy between 1986 and 1989. All covariates and baseline performance variables were measured at two time points, 1985 and 1989. Table 2 presents a summary of the measures and descriptive statistics for all study variables.

Analysis

Because all the dependent variables were interval scaled, linear regression modeling was employed. Where appropriate (in the case of efficiency, adjusted admissions, and market share), we normalized the dependent variable and the baseline performance indicator using log transformation.

Our data contained repeated observations for some of the sample hospitals. Such repeated observations may bias the estimates because the error terms are correlated, thus violating the required assumption of independence among observations (Zeger and Liang 1992). In general, ignoring such correlations leads to lower standard errors and thus an overestimated significance of covariate effects. To account for such correlations, we employed the generalized estimating equations (GEE) approach (Zeger and Liang 1992). GEE controls for within-subject correlation by separating its effects from the estimation of regression coefficients and yields consistent estimates of parameters (Zeger and Liang 1992).

TABLE 2
Measurement, Data Sources, and Descriptive Statistics

Variable	Measurement	Data Source		Mean (SD)
Efficiency	Ratio of total expenses ($1000s) to statistical beds	AHA Annual Survey		166.79 (112.11)
Occupancy	Ratio of average daily census to statistical beds	AHA Annual Survey		0.59 (0.18)
Adjusted admissions	Sum of inpatient admissions and equivalent admissions attributed to outpatient services	AHA Annual Survey		8699.00 (8594.00)
Market share	Percentage of total adjusted admissions in county attributable to focal hospital	AHA Annual Survey		0.52 (0.39)
Cash flow	Ratio of net assets and depreciation to total assets	Medicare Cost Report		0.09 (0.19)
Corporate governance configuration	Degree to which hospital's governing board conformed to corporate model of governance	AHA Governance Survey		0.46 (0.14)
Size	Number of hospital beds set up and staffed	AHA Annual Survey		192.78 (178.45)
Ownership	Represented by a dummy variable: public; private nonprofits serve as the reference category	AHA Annual Survey	Public Private	0.30 (0.46) 0.70 (0.46)
Hospital teaching status	Presence of internship or residency programs (1 = yes; 0 = no)	AHA Annual Survey		0.16 (0.37)
System affiliation	Membership in multihospital system (1 = yes; 0 = no)	AHA Annual Survey		0.24 (0.43)
Institutional ties	Number of affiliations with accrediting organizations, national associations, and insurance groups	AHA Annual Survey		3.85 (1.64)
Rural location	Hospital's location in nonmetropolitan county	Area Resource File		0.48 (0.50)
Market competition	1 minus the Herfindahl index (sum of squared market share of all community hospitals in market)	AHA Annual Survey		0.54 (0.36)
Per capita income	Average income of residents of county of hospital	Area Resource File		16057.70 (4347.80)

Results

The mean of the corporate governance configuration measure for the entire sample was 0.44 (SD = 0.14) in 1985 and 0.47 (SD = 0.14) in 1989, with a range of 0.11 to 1.00. For the panel of hospitals with governance data in both periods of the study, the mean of the corporate governance configuration measure was 0.45 (SD = 0.14) in 1985 and 0.48 (SD = 0.14) in 1989 (statistics not shown). Intuitively, one would expect private NFP hospital boards to conform more closely to the corporate governance configuration than public NFP hospital boards do. Indeed, our results supported this expectation. The mean of the corporate governance configuration measure was 0.48 (SD = 0.14) in private NFP hospitals and 0.39 (SD = 0.13) in public NFP hospitals. These results also indicate only incremental change in NFP boards' adoption of the corporate governance model over the study period and show that in practice most hospitals employ a hybrid form of the ideal governance models.

Table 3 presents the results of hypothesis testing. The coefficients of corporate governance configuration are consistently positive across the models for the five different performance indicators. Three of the coefficients are statistically significant at $p < 0.05$. Specifically, NFP hospitals whose governance configuration conformed more closely to the corporate model displayed greater efficiency ($\beta = 0.067$, standard error [SE] $= 0.022, p < 0.01$), had a greater number of admissions ($\beta = 0.225$, SE $= 0.060, p < 0.001$), and achieved a larger share of the local market ($\beta = 0.040$, SE $= 0.011$, $p < 0.001$). The associations of governance configuration and occupancy and cash flow did not achieve statistical significance, controlling for other covariates in the model.

As expected, baseline performance was related to the four-year average hospital performance, except for the case of cash flow. The result may be due to the high level of volatility in hospital cash flow, which also may explain the lack of relationship between governance configuration and cash flow. Hospital size was positively related to efficiency, occupancy, and cash flow but was negatively associated with adjusted admissions. Public NFP hospitals had a lower cash flow than did private NFP hospitals. Teaching NFP hospitals had greater adjusted admissions but a lower cash flow compared with their nonteaching counterparts. Hospitals with more institutional ties had a higher market share and a greater cash flow. Market competition was positively related to cash

TABLE 3
Governance Configuration as a Predictor of Nonprofit Hospitals' Financial, Strategic, and Operational Performance

	Efficiency		Adjusted Occupancy		Admissions		Market Share		Cash Flow	
	β	SE	β	SE	β	SE	β	SE	β	SE
Intercept	0.506***	0.076	7.256***	0.988	−0.099	0.059	−0.066*	0.032	0.081***	0.014
Corporate governance configuration	**0.067****	**0.022**	**0.674**	**0.970**	**0.225*****	**0.060**	**0.040*****	**0.011**	**0.014**	**0.014**
Baseline performance[a]	0.974***	0.007	0.829***	0.010	1.006***	0.007	0.978***	0.009	−0.021	0.050
Size (100's)	0.009***	0.002	0.758***	0.116	−0.008**	0.003	−0.002	0.002	0.005*	0.002
Public	−0.006	0.007	−0.334	0.316	0.008	0.008	0.003	0.005	−0.010*	0.005
Teaching hospital	−0.013	0.009	0.229	0.384	0.015*	0.007	0.004	0.008	−0.018*	0.008
System affiliation	−0.009	0.007	0.043	0.318	−0.007	0.007	−0.001	0.005	−0.007	0.007
Institutional ties	0.005	0.003	0.184	0.120	0.004	0.002	0.007**	0.003	0.005*	0.002
Market competition	0.011	0.011	−0.203	0.550	−0.012	0.010	0.043	0.030	0.020**	0.007
Per capita income ($10,000s)	−0.005	0.009	0.391	0.472	0.007	0.009	−0.007	0.008	−0.021**	0.007
Rural location	−0.010	0.008	0.264	0.379	−0.003	0.008	0.015*	0.006	−0.004	0.005
Year 1989	0.033***	0.007	−0.397	0.328	0.106***	0.011	0.016**	0.005	0.011	0.006

Notes: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
[a]The indicator for baseline performance is the same as that for the dependent variable.

flow, and per capita income in the county was negatively related to cash flow. NFP hospitals in rural areas, compared with those in urban areas, had a greater share of the local market. System affiliation was not significantly associated with any of the performance indicators. Finally, the coefficients of the time-effect variable suggest that the sample NFP hospitals had greater efficiency, adjusted admissions, and market share between 1985 and 1989.

As a sensitivity test, we repeated the analysis with two different specifications of the model: one measured performance in the year after the predictors were assessed (i.e., a one-year lag) and the other measured performance two years after the predictors were assessed (i.e., a two-year lag). The results were similar to those shown in table 3. In all the analyses, corporate governance configuration was positively and significantly related to efficiency, adjusted admissions, and market share but had no significant association with occupancy and cash flow. Thus, the results of the analysis appeared to be reliable, regardless of how the dependent variables were specified, as either four-year averaged performance or single-year performance with a one- or two-year lag.

Although our analyses largely supported the main hypotheses, these effects may not pertain equally to all categories of NFP hospitals. For example, public and private NFP hospitals may differ fundamentally in both their governance structures and performance goals. Similarly, the performance objectives of boards of hospitals affiliated with multihospital systems may differ from those of freestanding hospitals (e.g., integrating services with other system hospitals). To explore these questions, we conducted a stratified analysis to examine whether the effects of governance configuration on performance varied by ownership and system affiliation. To do this, we performed a separate regression analysis for private and public NFP hospitals and for system-affiliated NFP hospitals and freestanding hospitals. The results of these analyses suggested several notable differences between the two categories of hospitals. As the results in table 4 show, higher levels of adjusted admissions were associated with greater correspondence to the corporate governance configuration in private NFP hospitals. For public NFP hospitals, corporate governance configuration was significantly and positively associated with three performance indicators: efficiency, adjusted admissions, and cash flow. Similar differences were noted for system versus freestanding hospitals. The positive effects of corporate governance configuration on performance appeared to apply primarily to freestanding NFP

TABLE 4
Governance Configuration as a Predictor of Financial, Strategic, and Operational Performance: Stratified Analysis by Ownership and System Affiliation

	Efficiency		Occupancy		Adjusted Admissions		Market Share		Cash Flow	
	β	SE	β	SE	β	SE	β	SE	β	SE
Private	0.054	0.034	5.804	1.513	0.105***	0.027	0.045	0.023	0.006	0.023
Public	0.257**	0.066	0.546	2.916	0.176**	0.058	0.051	0.040	0.099**	0.036
System affiliation	0.197**	0.129	4.201	2.805	0.061	0.051	0.022	0.105	0.046	0.053
Freestanding	0.099**	0.022	3.790*	1.561	0.148***	0.028	0.050	0.014	0.051*	0.022

Notes: For the sake of parsimony, only the coefficients of the governance configuration variable are presented; full model results are available from the authors.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

hospitals regarding efficiency, occupancy, adjusted admissions, and cash flow. Governing board configuration was positively associated only with efficiency for system-affiliated NFP hospitals.

To ascertain whether the effects of board configuration changed over time, we also stratified the models by time period, conducting one set of analyses for the period between 1985 and 1988 and the other for the period between 1989 and 1994. These stratified analyses showed no consistent pattern of time-variant effects. We further examined the time-variant pattern using two different specifications of the dependent variables in each of the two study periods, that is, the performance in the year after the predictors were assessed (i.e., a one-year lag) and the performance two years after the predictors were assessed (i.e., a two-year lag). Of the governance configuration coefficients that were significant, about an equal number were significant in both periods. These results suggest no clear evidence that the impact of governance configuration changed between the 1985 and 1989 periods (results are available from the authors).

Discussion

Our findings indicated a positive association between more corporate governance configurations in NFP hospitals, on the one hand, and several key hospital performance indicators, on the other. In particular, governing boards that conformed more closely to the corporate model were consistently associated with enhanced operational efficiency, higher volume of adjusted admissions (possibly through the introduction of more disciplined and business-oriented management principles), and larger market share (perhaps by using more aggressive marketing strategies, diversifying hospital services, and building extended referral networks). These results appeared robust when alternative model specifications and lag structures were employed. Our findings, however, indicated no statistically significant relationship between governance configuration and improved financial performance, as measured by cash flow. It is possible that statistically significant relationships may be found if other financial indicators (e.g., return on investment) were available and used in the analysis. Another possible explanation is that improvements in marketing, service provision, and network building may require significant capital investment and therefore limit the hospital's cash flow.

We also did not find a significant relationship between occupancy and governance configuration in NFP hospitals, perhaps because bed allocation and staffing were primarily managerial, rather than governance, concerns.

Despite finding positive associations between the corporate governance configuration and several key performance indicators, a universal shift to a more corporate model of governance by NFP hospitals may not be warranted. Indeed, our results also indicate that the relationship between NFP governance configuration and hospital performance may depend on the type of hospital. Specifically, public and freestanding NFP hospitals were more likely to show the effects of governance configuration on performance than were private hospitals or those affiliated with multihospital systems. Given that governing boards in public NFP hospitals conformed less to the corporate governance model, we suspect that public hospitals adopting more corporate governance configurations may differentiate themselves more clearly from their peers, and the impact on hospital performance may became more pronounced as a result of this distinction. The differences between freestanding and system-affiliated NFP hospitals may be explained by the fact that hospital participation in multihospital systems added a level of complexity to governance, as hospital trustees were made accountable, or at least responsive, to the interests and concerns of a superordinate authority. Traditionally, governing boards focused on the hospital as an institution and the local community as the accountable entity. Now that a greater proportion of hospitals, NFP as well as FP, have become part of a multi-institutional system and network, how such hierarchical and embedded arrangements may affect hospital governance functions needs further exploration.

Our research considered a range of performance outcomes related to hospitals' financial and operational activities. Although this set of performance measures is probably more extensive than those used in most research on governance effectiveness, it is by no means exhaustive. Indeed, research on NFP governance performance must acknowledge the diversity of governance stakeholders and make explicit the perspective from which performance is being defined and measured. From management's standpoint, board performance may be defined in terms of absence of interference in hospital operations and board support for management policies and strategies. From the community's perspective, performance may take the form of adequate access to services, provision of charity care, and maintenance of the institution's financial viability. From the board's

perspective, performance may take the form of the hospital's survival, recruitment of competent top management and medical staff, timely implementation of strategic decisions, and maintenance of relationships with key external constituencies.

Our study is based on the assumption that NFP hospital governing boards consist of a series of interconnected and highly interdependent components rather than a set of independent elements that can be effectively separated from one another. Our findings document that those hospital boards conforming more closely to a corporate model of governance perform better on a variety of outcomes. Corporate governance is seen as a set of interrelated components that emphasize a small number of trustees, a focus on highly selected skills or backgrounds of trustees, tight evaluation/scrutiny of the CEO, greater management participation on the board, and more emphasis on the hospital's strategic concerns. Attention to the gestalt of governance, as opposed to narrowly focusing on one element (e.g., board size, term limits for board members), may be necessary in order to make boards more effective. Governing boards, like organizations themselves, consist of many different elements (e.g., structure, composition, activities, policies), all of which must work together as a system to be effective.

Limitations

Several limitations of the study should be noted. First, the hospital governance data for this study were based on surveys conducted in the mid- to late 1980s, and the dependent variables reflected hospital performance in the period between 1986 and 1994. Accordingly, our findings should be generalized with caution to NFP hospitals in recent years. Given the greater emphasis on governing board accountability (e.g., the Sarbanes-Oxley Act of 2002) and challenges to NFP hospitals' tax-exempt status, replication of our analysis with recent data will be important. These issues notwithstanding, the goal of our study was to assess the relationship between board configuration and hospital performance, not to evaluate the impact of contemporary oversight and accountabilities on board performance. We believe that our data are consistent with this goal and that our findings are applicable to contemporary health care. Indeed, other studies have shown that board function and structure have been remarkably stable over time and that governance is important to ensuring continuity in the organization's mission, values, and corporate culture

(Green and Griesinger 1996; Margolin et al. 2006). Even though conditions in the health care sector have changed, the fundamental question of how governance affects hospital performance remains salient. Furthermore, recent data indicate that characteristics in our model, such as board size, term limits, and "insider representation" on hospital boards, have changed only slightly between 1997 and 2005 and continue to show wide variation across hospitals (Margolin et al. 2006). Indeed, discussions in the literature suggest that issues such as board size, term limits, management role on the board, and oversight stringency are as important today as they were when our data were collected.

Second, although the response rates to the two governing board surveys were comparable to other hospital surveys, the hospitals included in the study sample may not be representative of the NFP hospital population. To the extent that the response rate and missing data were systematically related to hospital governance configuration and performance, the results of our study may be biased.

Third, despite the wide range of performance measures we examined in this study, we make no claim for comprehensiveness. Important outcomes such as the NFP hospital's debt structure, return on investment, quality of care, charity care, and provision of community benefits should be assessed in future research in order to present a "balanced scorecard" in relation to different governance configurations.

Conclusion

We found the corporate model of hospital governance to be associated with positive NFP hospital performance and little evidence of trade-offs among various aspects of organizational performance under different governance configurations (e.g., efficiency and market share). These findings represent a modest beginning to answering the question, Does governance make a difference? The American NFP community hospital and its related organizational forms are arguably some of the most complex of all modern organizations. Their attributes stem from factors such as the hospital's alleged commitment to meeting the health needs of the local community, the mutually dependent (and changing) relationship between the hospital and its medical staff, the advances and rapid obsolescence of medical technology, the mix of professional and technical personnel necessary to deliver medical care, the highly regulated

health care environment, and, perhaps most important, the fundamental changes in the role and mission of hospitals as they confront an increasingly complex and competitive marketplace. While we do not propose a "one-best" path to the goal of creating a modern and effective model for hospital governance (Alexander, Lee, and Bazzoli 2003), our findings support the notion that a key to improving hospital governance is to advance our understanding of governance from its current normative and prescriptive foundations to a stage at which scientific findings are the accepted standard of governance knowledge.

Endnote

1. The formula for Gower's coefficient is

$$G = \sum_{k=1}^{P} S_{ijk} \Big/ \sum_{k=1}^{P} W_{ijk}$$

where W_{ijk} is a weighting variable valued at 1 when the data for observation j on variable k are not missing and valued at zero otherwise. In this study, data for observation i are never missing, since this "observation" represents the ideal profile of either the corporate or the philanthropic governance type. S_{ijk} is a dissimilarity "score" based on the outcome of the comparison of variable k across cases i (the ideal profile) and j. In the case of binary variables, S_{ijk} is set equal to 1 if case j does not match the ideal profile, and it is set equal to zero otherwise. When variable k is measured on an interval scale, the value of S_{ijk} is given by

$$S_{ijk} = |x_{ik} - x_{jk}|/R_k$$

where x_{ik} is the score of ideal profile on variable k and R_k is the range of variable k. The same formula is used to compute the value of S_{ijk} when variable k is measured on a ratio scale.

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Appendix
Attributes of Governing Boards

Board Size. The number of members on a hospital's board.

Occupational Heterogeneity of Board Members. The breadth of occupations represented on the board is calculated as a percentage of board membership of each of the fourteen mutually exclusive groups squared and then summed (similar to the Herfindahl index). The maximum value of the index is one if the entire board consists of a single occupational group. Smaller values indicate a more heterogeneous board. Occupational categories assessed were physicians, other health professionals, hospital CEO, religious, lawyers, educators, bankers/financiers, independent businesspersons, corporate executives, farmers/ranchers, government officials/agency representatives, labor officials/representatives, and homemakers.

Insider Representation on the Board. A ratio-scaled measure is constructed as the number of board members who are physicians with active privileges at the hospital, divided by the total number of board members.

CEO Voting Privileges on Board. A score of zero on this dummy-coded measure indicates that the hospital CEO does not have voting privileges on the board, and a score of one indicates that the hospital CEO does have voting privileges on the board. Hospitals that score zero may still permit the hospital CEO to have nonvoting (ex-officio) status.

Limit on Board Member Terms. A score of zero on this dummy-coded measure indicates that a hospital places no limit on board member terms, and a score of one indicates that a hospital does place a limit.

Board Member Compensation. A score of zero on this dummy-coded variable indicates that no compensation is offered to board members, and a score of one indicates that compensation is offered. This measure excludes travel reimbursement from the definition of compensation.

Emphasis on Strategic Activity. This dummy-coded measure indicates whether or not in the past twelve months strategic issues have occupied most of the board's time. Topics classified as strategic issues include mergers, joint ventures, strategic planning, and competitive position. The measure was coded zero if strategic issues did not occupy most of the board's time and one if strategic issues occupied most of the board's time. Note that a score of zero does not indicate that strategic issues were not important agenda items but merely that they were not the most important.