Not-for-Profit Healthcare Rating Methodology

Summary

This rating methodology explains Moody’s approach to assigning ratings to Not-for-Profit Hospitals and Health Systems. Moody’s rating analysis for this sector covers credit factors that are common across all public finance sectors, such as governance, operating profitability and balance sheet strength, as well as sector-specific factors such as payer mix, federal regulatory reform and reimbursement trends.

This report provides a reference tool that can be used when evaluating credit profiles for not-for-profit hospitals, helping investors, borrowers and other interested market participants understand how key quantitative and qualitative characteristics drive and influence rating outcomes. It provides an in-depth discussion of the five main analytical factors and ratios that generally apply to all hospitals and are major drivers of hospital ratings. However, it does not include an exhaustive discussion of all factors and ratios that might be considered relevant in determining an individual hospital’s unique credit attributes.

It is important to note that we do not expect any rating changes as a result of implementing this methodology.

The five key factors that form the basis of our rating assessment for not-for-profit hospitals and health systems are:

» Market Position
» Operating Performance
» Balance Sheet and Capital Plan
» Governance and Management
» Debt Structure and Legal Covenants

This methodology updates and replaces Moody’s Rating Methodology for Not-for-Profit Hospitals and Health Systems published in January 2008. In this report we introduce a scorecard which includes a weighted quantitative grid as well as qualitative factors. The scorecard is shown in Appendix A and replaces the matrix included in the 2008 report that provided measurable and descriptive characteristics by broad rating category for each of the five key factors. The scorecard grid provides greater transparency and clarity into how we assess credit quality in the sector.
Quantitative and Qualitative Credit Factors

Our ratings incorporate a combination of quantitative metrics and qualitative considerations that do not lend themselves to a transparent presentation in a grid format. In this rating methodology we begin with a scorecard grid indicated rating generated from the weighted average of the quantitative metrics, which include the key factors of market position, operating performance, and balance sheet and capital plan. The weight for each factor in the grid represents an approximation of its typical importance for rating decisions, but actual importance may vary significantly in individual rating decisions. The quantitative grid represents a balance between greater complexity that would result in grid-indicated ratings that map more closely to actual ratings and simplicity that enhances a transparent presentation of the factors that are typically most important for ratings in this sector.

This methodology makes explicit the rating approach that has been in practice for many years, which has proven strongly predictive of credit risk over that period of time. In that context, the scorecard was calibrated through expert judgment and an analysis of historical ratios by rating category, with an eye toward obtaining a strong correlation actual ratings and scorecard ratings based on FY2009 and FY2010 data.

The first three sections of the scorecard utilize quantitative data taken from a hospital’s audit and supplemental disclosure to measure the key factors of market position, operating performance and balance sheet and capital plan. The weight of each factor in the grid represents an approximation of its typical importance in rating decisions but its ultimate weight in the final rating decision will vary depending on assessment of qualitative and other quantitative factors unique to the hospital being rated.

Following the quantitative grid scoring, we assess qualitative considerations and factors that do not lend themselves easily to statistical measurement: governance and management, and debt structure and legal covenants, as well as other credit characteristics unique to the hospital being rated. These factors are assessed during the rating process and can often have a major impact on the final rating, sometimes resulting in an adjustment of up to three notches, up or down, from the quantitative scorecard implied rating.

Assessing governance, management, debt structure, and strategic factors to arrive at a final rating necessarily requires a degree of judgment. Our methodological approach involves evaluating sub-factors, such as internal controls, strategic planning, and depth of leadership, which hospitals depend on to manage it credit position. We then assign each sub-factor a score of positive, negative, or neutral.

We also incorporate other credit specific considerations into our qualitative analysis that are not otherwise explicitly captured in the scorecard or in our assessment of government, management and debt structure. This could include evaluation of factors that are extensions of our analysis of factors in the quantitative grid, such as multi-year trends in key ratios or unusually large unfunded pension liabilities or operating lease exposures that could weaken the balance sheet and inflate comprehensive debt. These assessments could add or subtract credit risk from what is implied in the score total of the first three quantitative factors. Credit specific considerations also include assessment of individual risks related to governance and management, such as the hospital’s ability to respond to sudden event risks, including natural disasters or unfavorable malpractice judgments not covered by insurance. It would also include evaluation of atypical exposures to various other risks, such as changes in federal regulations, competitor consolidations or union strife.
The net result of our positive, neutral or negative judgments of the qualitative credit factors and individual credit characteristics is then combined with the quantitative scorecard to arrive at a final rating. A preponderance of positive assessments of these sub-factors and individual credit characteristics will typically result in a higher final rating than implied by the quantitative scorecard alone, while the converse is true for a preponderance of negative assessments. The two broad non-quantitative factors of the methodology (governance and management and debt structure and legal covenants) are discussed in depth in their respective sections.

**About Moody’s Rated Hospitals and Health Systems**

Moody’s currently rates 533 U.S. not-for-profit hospitals and health systems with a combined $181 billion of debt outstanding. The median rating for Moody’s rated portfolio is A3 and A3 when weighted by the amount of rated debt outstanding. As seen in Figure 1, 90% of our health care ratings are investment grade. Nearly all of the below investment grade ratings are “fallen angels” that were originally rated investment grade but were downgraded due to financial and liquidity erosion, strategic missteps or increased competition that led to material volume declines and financial deterioration.

To date, we have not assigned a rating of Aaa to a not-for-profit healthcare provider. While we cannot say with certainty that we will never have an Aaa-rated hospital credit, we believe this is unlikely due to the inherent volatility of the healthcare industry relative to other municipal sectors.

**FIGURE 1**

*Not-for-Profit Healthcare Portfolio Rating Distribution*

*As of December 31, 2011*
Factor 1: Market Position

Market position refers to the general environment in which the hospital operates as well as factors which describe the hospital itself, such as size or exposure to government payers. In other words, a hospital’s market position describes the hospital in terms of its size, the growth rate of its business, the healthcare insurance of its patients, and the hospital’s relationship with competitors and the physicians who admit patients to the hospital. Our analysis of market position takes into account quantitative factors like revenue base, revenue growth rate, and intangible factors like reputation, and the strength of management’s relationship with the physicians responsible for patient volume. A hospital with a strong market position is able to negotiate higher reimbursement from commercial health insurers, and has a greater ability to attract patients and physicians to its facilities in a competitive market.

The following describes the market position sub-factors we include in the scorecard and their relative weights. In addition, we may consider other quantitative and qualitative sub-factors, which are described immediately following this section.

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Market Position (45%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Revenue ($000's)</strong></td>
<td>25%</td>
</tr>
<tr>
<td><strong>Revenue Growth Rate (%) (3 yr CAGR)</strong></td>
<td>10%</td>
</tr>
<tr>
<td><strong>Medicare and Medicaid payer mix (% of Gross Revenues)</strong></td>
<td></td>
</tr>
<tr>
<td>Medicare</td>
<td>5%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>5%</td>
</tr>
</tbody>
</table>

**Total Revenue**: measured as total operating revenue, as adjusted by Moody’s. Total operating revenue is a crucial indicator of stability, diversification of product lines and revenue sources, and ability to generate sufficient cash flow for capital investment. A larger revenue base is viewed as a positive credit factor and in general, a larger revenue base is associated with greater stability and a higher rating.

**Revenue Growth Rate**: measured by the three year compound average growth rate (CAGR). Healthcare inflation and the cost of supplies, drugs, and capital inflation continue to grow faster than the general rate of inflation. Therefore, a hospital’s ability to generate increasing revenue is a key indicator of financial strength. In addition, a higher CAGR suggests a hospital is able to grow patient volume and generate reimbursement increases from healthcare insurance companies. A higher CAGR is viewed as a positive credit factor.

**Medicare and Medicaid Payer Mix**: measured by gross revenues attributable to Medicare and Medicaid. Medicare and Medicaid generally reimburse hospitals at a rate far lower than commercial insurance. The hospital industry compensates for the lower reimbursement by “cost shifting” or charging higher rates to commercial insurers. A lower share of gross revenue attributable to Medicare and Medicaid is viewed as a credit positive.
Other Sub-Factors We May Consider When Evaluating Market Position

Hospital Scope and Market Share

» Market Share: measured as the share of admissions within a geographic area. Market share influences bargaining power with health insurance companies and can reflect essentiality of services within a market. However, this measure has several significant limitations: 1) market share is calculated based on inpatient admissions whereas an increasing share of patient services are provided in an outpatient setting; 2) there is no accepted definition of how to calculate market share, therefore the market over which market share is calculated often varies; and 3) market share is measured at the hospital level and does not capture strong share in particular service lines, or reflect the delivery of unique services.

» Breadth and Depth of Services: a broad service array allows a hospital to keep more patients in house and not be forced to refer out for services not provided. It also helps to recruit and retain specialists that may not be able to see enough patients at a smaller hospital. Therefore, a broad service array is a credit positive.

» Variety of Access Points: healthcare continues to migrate to an outpatient setting and hospitals are deriving an ever larger share of revenue from outpatient services and competing with other providers for outpatient business. In most markets, it is essential to maintain a variety of outpatient services, located in favorable geographic areas, in order to drive patient volume to the hospital and maintain or grow market share. A large number and broad scope of outpatient services is viewed positively

Service Area Characteristics

» Population Demographics: population growth rates, age composition, and payer mix. A growing population will result in increased demand for a hospital’s services. A balanced payer mix that includes lower exposure to government payers and a sufficient percentage of commercially insured patients is important in order to maintain adequate profitability.

» Socioeconomic Indicators: unemployment rate, wealth and poverty indicators. Wealthier populations tend to be insured and result in lower incidence of bad debt. The unemployment rate is a key indicator of the economic health of a service area.

» Industry Regulation: presence or absence of Certificate of Need (“CON”) regulation and regulatory difficulty to build new healthcare facilities. The presence of CON creates significant barriers to entry and limits competition, factors that are positive from a credit perspective.

Hospital Reputation and Physician Relations

» Medicare Case Mix Index: a measure of acuity that indicates the complexity of services provided. Higher acuity results in greater reimbursement and is often associated with a strong clinical reputation.

» Unique Services: we explore whether a hospital provides any unique services in the community and how that drives patient volume or market share. Unique services may be high acuity (ex: transplantation) or low acuity (labor and delivery).

» Physician Recruitment Trends: the ability to grow the medical staff through net physician additions and success at filling vacant positions is crucial to a hospital’s ability to maintain sufficient volume trends and provide a sufficient array of services. We examine net additions to the medical staff as well as the average age and composition of the medical staff.

» Quality: We consider a hospital’s clinical reputation and mix of quality awards to be important indicators of the hospital’s brand perception within the community. While we do not endorse any particular award, we do consider the difficulty in obtaining the award or designation.
Factor 2: Operating Performance

Operating performance refers to the set of financial ratios that measure a hospital’s profitability of the hospital on an absolute basis and leverage metrics which measure profitability relative to the debt burden. In addition to single year performance, we also consider trends in operating performance when assigning a rating. Steady, consistent, and predictable operating results are viewed as credit positives. While improving financial results are always viewed as a credit strength, operating performance that varies significantly year to year is often considered a credit negative due to the difficulty it presents for budgeting and planning purposes.

Our analysis begins with a hospital’s audited financial results, and includes a review of budgets and projections. We also regularly review quarterly financial performance and may make rating decisions based on interim performance.

The following describes the operating performance sub-factors we include in the scorecard and their relative weights. In addition, we may consider other quantitative and qualitative sub-factors, which are described immediately following this section.

<table>
<thead>
<tr>
<th>FACTOR 2</th>
<th>Operating Performance (30%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td></td>
</tr>
<tr>
<td>Operating Cash Flow Margin (%)</td>
<td>10%</td>
</tr>
<tr>
<td>Debt to Cash Flow (x)</td>
<td>10%</td>
</tr>
<tr>
<td>MADS Coverage (x)</td>
<td>10%</td>
</tr>
</tbody>
</table>

Operating Cash Flow Margin: measured as operating cash flow (operating income plus depreciation and interest expense) divided by total revenue. This ratio indicates a hospital’s ability to generate cash from operations. It is a purer measure of financial performance (compared to operating income) since it isolates cash generated from operations before debt service payments are made. A higher ratio is a credit positive.

Debt-to-Cash Flow: measured as direct debt divided by net revenues available for debt service, less interest expense. This ratio expresses the time in years it would take to pay down the principal amount of debt outstanding if all cash flow were directed toward debt repayment. A lower ratio is a credit positive as it implies a lower debt burden.

Maximum Annual Debt Service (MADS) Coverage: measured as net revenue available for debt service, divided by MADS. This ratio computes debt service coverage using cash flow from all available sources including operating revenue, investments, and non-operating revenue. A higher ratio is a credit positive as it indicates stronger debt service coverage.

Other Sub-Factors We May Consider When Evaluating Operating Performance

» Revenue Cycle: measured by net days in accounts receivable and days in accounts payable. We compare these statistics to industry averages and to the hospital’s own levels over time. Rising net days in accounts receivable indicates operational difficulties collecting reimbursement and is a use of cash. Conversely, stretching days in accounts payable is a source of cash, but is not a sustainable source of working capital. Stronger credits are characterized by ratios that are in line with industry averages and trends that are stable or improving.
» **Expense Growth Rate**: we examine the overall growth rate of expenses year to year. We pay particular attention to salaries and benefits as these are the largest component of a hospital’s expenses. We also pay particular attention to the growth in bad debt and charity care. We compare the growth rate of expenses to that of revenue; revenue growth that exceeds expense growth is necessary to maintain profitability.

» **Trends in Performance**: we consider multi-year trends in operating performance when assigning ratings. Variable and unpredictable operating performance often results in a lower rating than would otherwise be expected. Improving results are considered a credit positive and may result in a positive outlook or rating upgrade, while a trend of declining results is viewed as a credit negative and may result in a negative outlook or rating downgrade.
Factor 3: Balance Sheet and Capital Plan

A hospital’s balance sheet provides a snapshot of how much risk the organization is willing to take with regard to its investment and debt policy and how long it can fund operating expenses using balance sheet reserves. Hospitals maintain cash and investment portfolios to provide working capital, fund capital expenditures, generate investment returns that can support programs, or to meet covenants under lending agreements.

Our analysis of the balance sheet considers both direct debt (debt that is capitalized on the balance sheet) and comprehensive debt which includes the unfunded pension liability and a capitalization of operating leases. The ratios in the scorecard are calculated using direct debt, but cash to debt is also recalculated using comprehensive debt.

The following describes the balance sheet sub-factors we include in the scorecard and their relative weights. In addition, we may consider other quantitative and qualitative sub-factors, which are described immediately following this section.

### FACTOR 3
**Balance Sheet and Capital Plan (25%)**

<table>
<thead>
<tr>
<th>Sub-factor</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days Cash on Hand (x)</td>
<td>10%</td>
</tr>
<tr>
<td>Cash to Debt (%)</td>
<td>10%</td>
</tr>
<tr>
<td>Monthly Liquidity to Demand Debt (%)</td>
<td>5%</td>
</tr>
</tbody>
</table>

- **Days Cash on Hand**: measures the number of days a hospital could continue paying its operating expenses from existing unrestricted cash and investments in the absence of any future cash inflow. A higher ratio indicates greater financial flexibility and is considered a credit positive.

- **Cash-to-Debt**: measured as the ratio of unrestricted investments to total direct debt. This ratio provides a measure of balance sheet leverage. A higher ratio indicates a stronger balance sheet and is considered a credit positive.

- **Monthly Liquidity to Demand Debt**: measured as monthly liquidity divided by demand, or “put” debt. This ratio compares the amount of liquid financial resources to the amount of debt that a hospital could be forced to repay immediately. For more information on our calculation of monthly liquidity see New Liquidity Measures Show Healthy Liquidity Among Not-for-Profit Hospitals (report #129299).

### Other Sub-Factors We May Consider When Evaluating a Hospital’s Balance Sheet

#### Investments
- **Liquidity**: measures what share of investments can be liquidated within a month, year, or a longer period. We require hospitals to complete a template that indicates what share of investments can be liquidated within these timeframes. Greater investment liquidity indicates greater ability to meet short term, emergency needs.

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1 Demand debt is defined as any debt where the bondholder has the right to tender bonds with short notice and includes variable rate demand bonds, commercial paper, all put bonds (regardless of put date), bank bonds, amounts outstanding under bank operating lines of credit, and bank loans with a tender feature.

2 For more information see New Liquidity Measures Show Healthy Liquidity Among Not-for-Profit Hospitals (report #129299).
Asset Allocation: measures the allocation to typical asset classes within the investment portfolio. We calculate asset allocation in order to gauge a hospital’s risk appetite with respect to its investment portfolio, broadly measured by its relative weighting in equities and alternative assets, which are riskier, compared with its weighting in less risky cash and short-term fixed income. We believe that an asset allocation which matches the volatility of the hospital’s operating profile as well as its need to support capital projects or programs with internal funds is a credit positive. Conversely it is often viewed as a credit negative when hospitals with weak operating performance adopt aggressive investment allocations. Although hospitals frequently covenant not to exceed a maximum debt-to-capitalization ratio, covenants are rarely applied to restrict investment allocations.

Manager & Fund Diversity: a high degree of manager concentration is a red flag in our analysis. Although a particular fund may be well diversified, over exposure to a particular manager still introduces operational risk. Typically, an allocation of over 20% to any fund or manager is seen as a credit negative.

Board Oversight: the board has responsibility for setting investment policy. We review target asset allocation to assess the board’s investment philosophy and risk tolerance. See a fuller discussion in the Governance and Management section.

Donor Restricted Investments: although we do not include donor restricted investments in calculations of key ratios like days cash on hand, or cash-to-debt, we do consider large pools of donor restricted investments as a credit positive, particularly when those assets can be used to support capital projects, or programs related to the mission of the hospital (for example, research, or charity care).

Investment in Plant

Average Age of Plant: measured by dividing accumulated depreciation by depreciation expense. The ratio provides a rough approximation of the average age of the facility, with a lower age implying newer facilities.

Capital Spending Ratio: measured by the ratio of capital spending to depreciation. Large capital projects often distort this ratio by artificially increasing it in the year a project is brought on line and reducing it in subsequent years. We examine a multi-year trend to smooth out year-to-year fluctuations. An average ratio of at least 1.2 times indicates a competitive facility.

Physical Condition: Moody’s analysts periodically visit hospitals to conduct a tour of existing facilities and tour new construction sites. Our visits allow us to assess the physical appearance of buildings and the hospital campus and see how close the hospital is to competitors, transportation corridors, and other services.

Balance Sheet Leverage

Debt to Capitalization: measured as total debt divided by unrestricted net assets, this widely used ratio succinctly expresses the debt burden as a percentage of assets. It is frequently used as a financial covenant in trust indentures and bank lending agreements. A lower ratio indicates that the hospital maintains lower leverage.

Debt to Revenue: this ratio compares the debt burden to the size of the hospital’s operating base. As 80% of Moody’s rated hospitals have less than 50% debt-to-revenue, this ratio is frequently used to identify outliers. A lower ratio suggests lower leverage.

3 A notable exception are public hospitals which are frequently restricted to investments in cash and highly rated fixed income securities. Approximately 15% of Moody’s rated portfolio is subject to this limitation.
Defined Benefit Pension

- **Funded Status:** measured as the projected benefit obligation (PBO) less the fair value of plan assets. The underfunded status is considered debt and is added to existing debt in order to recalculate leverage ratios. We compare the underfunded liability to the size of other debt liabilities in order to determine its impact. A funded status at or close to 100% indicates a lower pension obligation.

- **Discount Rate:** the interest rate that is used to discount future liabilities (i.e. the PBO) to their present value. This rate is determined by management, but is influenced by prevailing market interest rates. A lower discount rate results in a higher PBO and therefore lower funded status. We expect a hospital’s discount rate to be in line with that used by other hospitals.

- **Historical Funding Ratio:** we measure the trend of the plan’s funded status. We recognize that changes in the discount rate and market returns are beyond management’s control and that one year swings in the funded status may not represent management’s long term strategy vis-à-vis the pension. Therefore, we examine the multi-year funded status. A multi-year track record of near 100% funding is viewed favorably.

- **Annual Contributions:** the actual cash contribution to the plan, which often differs from the pension expense. We often ask about anticipated cash contributions, especially when the contribution exceeds the pension expense.

- **Plan Assets:** the asset allocation of the pension plan. We review investment strategy. Over-allocation to any particular asset class, or to overly aggressive investment strategies is viewed negatively.

- **Defined Contribution Plans:** we make no adjustment for defined contribution plans. The expense associated with these plans is treated as ordinary operating expense and no balance sheet adjustments or additions to debt are needed.

- **Comprehensive Debt:** calculated by adding the unfunded pension liability and operating leases liability (see below) to debt. Comprehensive debt measures the total debt exposure for the hospital and is captured on the scorecard under *Other Credit Specific Considerations*. A lower number indicates lower leverage.

Operating Leases

- **Multiplier Method:** We use a 6x multiplier of the most recent year’s operating lease expense to convert the obligation to a debt equivalent. This amount is considered debt and is added to existing debt in order to recalculate leverage ratios.

- **Comprehensive Debt:** calculated by adding the operating leases liability and unfunded pension liability (see above) to debt. Comprehensive debt measures the total debt exposure for the hospital and is captured on the scorecard under *Other Credit Specific Considerations*. A lower number indicates lower leverage.

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4 We use the PBO as opposed to the accumulated benefit obligation (ABO) because the PBO takes into account anticipated salary increases and future service.
Debt Guaranties and Contingent Liabilities
Hospitals often guaranty the debt of physician joint ventures, affiliated hospitals, and other organizations. These guarantees are treated as obligations of the rated entity and are included in all leverage ratios. Similarly, debt that is insured by a third party including Federal Housing Administration or various state specific insurance programs is considered debt of the hospital because the hospital is still responsible for making debt service payments.

We include debt guaranties and contingent liabilities in our analysis under the following circumstances:

» Third party debt is included if the hospital has explicitly and irrevocably guarantied the debt
» Debt insured by a third party is included so long as the primary security for the debt is the hospital; this includes debt insured by Federal Housing Administration, or state agencies
» Debt backed by a Limited Tax General Obligation pledge is included in leverage ratios because if tax revenues are insufficient to make debt service, the taxing authority may not be able to raise taxes to increase revenue and the hospital must pay debt service
» Debt backed by an Unlimited Tax General Obligation pledge is excluded from leverage ratios because the issuing authority has covenanted to levy sufficient taxes to make debt service and has the authority to raise taxes, without limitation as to the rate or amount, in order to do so
Factor 4: Governance and Management

Governance and management are key factors in our rating methodology and form the core of our assessment of non-quantitative factors. We expect the importance of effective governance and management to grow as healthcare reform takes effect and new regulations and potentially new business models play increasing roles in the industry.

The weight of governance and management assessment in our analysis is particularly important when a hospital is facing strategic change, including: embarking on a major capital expansion program, initiating a significant new borrowing, undergoing financial stress or facing a weakening market position, or experiencing high turnover in senior management.

We do not assign a specific score to governance and management factors as we do for the quantitative portion of the scorecard, but we do assign each sub-factor a score of positive, negative, or neutral. The analysis of governance and management is largely qualitative and relies on a comparative analysis across our rated portfolio of over 500 hospitals and health systems.

The five broad governance and management factors we consider in our rating assessments are:

» Composition of Board and Senior Management
» External Disclosures and Internal Controls
» Integrated Short and Long-Range Planning
» Ongoing Self-Assessment and Benchmarking
» Government and Stakeholder Relations

4a) Composition of Board and Senior Management

Hospital board members and senior managers face the complex challenge of executing the hospital’s not-for-profit mission while generating positive cash flow and safeguarding and growing its financial resources such that the organization’s viability is maintained over the long-term. Not-for-profit boards are affected by multiple goals of key stakeholders, notably patients, physicians, nurses, management, and government regulators.

We examine a number of critical factors when assessing the board composition and senior management of a hospital, and consider the following positive attributes:

» Mix of tenured and new members with knowledge of institutional history as well as external best practices and strategies, thereby ensuring continuity as well as adoption of new perspectives
» Board members who provide expertise in the areas of risk and compliance management, financial statements, multi-year financial and capital plans, and investment strategies
» Chief executive officer who demonstrates clear understanding and leadership on financial and capital matters as well as the hospital’s mission and vision

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5 For more information see Moody’s special comment Governance and Management of Not-for-Profit Healthcare Organizations: A Key Driver of Ratings (report #129641)
» Strong chief financial officer and other vice presidents who demonstrate independent expertise and mastery of multi-year financial plans, budgets, and financial statements

» Leadership with diverse experience both inside and outside the hospital, including some experience from business, health insurance, physician relations, and government in addition to the healthcare industry

4b) External Disclosures and Internal Controls

Effective internal controls and timely external disclosure about quality outcomes, research productivity, financial performance, and organizational efficiency are the hallmark of effective hospital leadership and will become increasingly critical in mitigating new risks to individual hospitals and the sector overall. Effective internal controls are also important for maintaining accreditation and adhering to complex patient safety guidelines, compliance with increasing governmental regulations, contracts with Medicare and Medicaid and commercial payer contracts, and donor confidence.

We examine a number of critical factors when assessing the internal controls and external disclosure of a hospital, including:

» Board approved policies on investments, debt, liquidity, and conflicts of interest

» Detailed disclosure and transparency for internal decision makers and external stakeholders

» Appropriate staffing for effective implementation of policies

» Frequent board oversight of the chief executive officer, including annual performance assessment by multiple board members who rotate over time

» Use of internal audit function that reports to the board

» Detailed disclosure on hospital website or publicly available websites regarding quality initiatives, patient safety, financial statements, compliance with bond covenants and other regulatory requirements, and other material issues

» Filing of financial statements within 90-120 days of the fiscal year end, including detailed management discussion and analysis where appropriate for government hospitals, and where volunteered by others

» Availability of quarterly financial statements or other interim information

» Clearly defined board committee structure and responsibilities

» Term limits for board members

4c) Integrated Short and Long-Range Planning

Effective utilization of a hospital’s resources requires a long-term strategic plan, a mid-term flexible financial plan, prudent short-term budgeting, and the continuous alignment of all three. An effective board and management team will be willing and able to modify its short- to mid-term planning to meet its long-term goals. We believe that the most effective short- to mid-term plans incorporate detailed conservative, but realistic assumptions. Budgets and plans that are overly conservative or optimistic provide limited value in indicating the organization’s real potential and management’s ability to achieve its goals without causing financial stress.
Moody’s reviews a hospital or health system’s written strategic plan, master facilities or capital plan, as well as short-range and mid-range budget projections (one to five years). We analyze budget-to-actual results for volumes, operational performance, fundraising and investment returns. We examine management’s assumptions used in projections as well as use of stress testing scenarios.

The ability to meet budget and the use of realistic assumptions regarding future revenue generation and the ability to meet debt service projections are key factors in our assessment of short – and long – term planning. We develop opinions regarding the reliability of management prepared budgets and forecasts by comparing actual results to budget over a period of several years. A history of accurate forecasting is a positive rating factor.

We look for a number of critical factors and use of best practices when assessing the plans and planning process of a hospital, and consider the following positive attributes:

» Integrated strategic, capital, and financial plans
» Use of detailed multi-year financial plans and budgets that tie to audited financial statements
» Conservative budgeting, producing consistent operating surpluses
» Financial and capital scenario evaluation and stress testing
» Prudent endowment management and sustainable endowment spending policies that are regularly reviewed in the context of overall hospital risk assessment and multi-year financial plan (most applicable to children’s hospitals and some academic medical centers)
» History of meeting or exceeding internal forecasts for budget performance, volume trends, and quality measures
» Recognition of key risks in multi-year plans and development of contingencies for addressing them

4d) Ongoing Self-Assessment and Benchmarking

Self-assessment provides governing boards and management teams with the tools to identify challenges early on and develop strategies to address those challenges in the interest of maximizing efficiency. External benchmarking is of particular importance in light of increasing competition for patients and physicians. We believe that the most successful organizations follow best practices in self assessment, including use of a short list or “dashboard” of key metrics that are closely monitored on a regular basis to identify adverse trends quickly and development of contingency plans to make midyear adjustments when necessary.

Moody’s reviews the metrics and set of peer organizations by which a hospital chooses to measure itself. Well managed organizations compare themselves against a carefully selected set of peers rather than only to an ‘aspirant’ peer group that is likely to reflect hope and image over substance. We discuss with management the frequency and depth with which the information is reviewed by senior leadership and board members. We also inquire about examples of leadership actions based on a hospital’s performance relative to key indicators to understand its willingness and ability to react to developing situations.
We examine a number of critical factors when assessing the self-assessment and benchmarking process of a hospital, including:

» Benchmarking relative to best practices and strategies across healthcare sector

» Existence of key performance indicators that are regularly monitored

» Development of well considered contingency plans

» Regular performance reviews and assessment of the chief executive officer and top management

» In-depth institutional research and evaluation of competitive landscape

4e) Government and Stakeholder Relations

Hospitals are affected by the regulations that govern them. These regulations can be instituted by local, state, or federal bodies of government. Policies and regulations that affect hospitals include but are not limited to: patient safety issues and accreditation requirements; certificate of need regulations; healthcare taxing programs; required staffing levels instituted by state governments; reimbursement rates and supplemental payment programs under the Medicaid and Medicare programs managed by the state and federal governments; national healthcare reform and for certain governmental hospitals: tax rates that drive tax revenues (including county-owned, district-owned, and authority hospitals). These policies and regulations drive strategic decisions by management and the board as to where to invest capital as well as which services to provide, along with affecting the ability of the hospital to generate adequate cash flow to meet ongoing operating needs, build reserves and pay debt service.

We examine a number of critical factors when assessing the relationship of a hospital to various governmental bodies, including:

» Understanding of certificate of need regulation to ensure accurate and timely filing of requests for capital projects

» Ties to the state and national hospital associations for access to potential impact to operational and financial performance given proposed state or federal changes in regulation

» Representation in local and national lobbying efforts to influence regulatory developments to the healthcare industry, including: rate setting; reporting of and required levels of charity care provision; supplemental payment programs such as disproportionate share, upper payment limit, and federal matching programs
Factor 5: Debt Structure & Legal Covenants

Hospitals have access to a variety of external financing including tax exempt debt, bank loans, capital leases, operating leases, and other forms of borrowing. Each source of capital has advantages and disadvantages.

The three sub-factors we consider in our rating analysis of the debt structure and legal covenants are:

- Analysis of interest rate, counterparty, and refinancing risk
- Borrowing terms and covenants
- Legal security and other bondholder protections

5a) Interest Rate, Counterparty, and Refinancing Risk

Our analysis of a hospital’s debt structure begins by dividing debt into two categories: debt with exposure to interest rate, counterparty, and refinancing risk and debt that does not have this exposure. In general, fixed rate debt is not exposed to these risks because under most circumstances, it cannot be accelerated, does not have to be refinanced for long periods of time, and inherently has no interest rate risk. Conversely, variable rate debt is generally exposed to these risks because it almost always affords bondholders the right to exit their investment upon short notice, or at predetermined dates and by its nature is exposed to interest rate fluctuations.

The advantages of fixed rate debt are that debt service payments are known in advance and capital is usually committed for long periods of time, up to 40 years in some cases. The primary disadvantage of fixed rate debt is higher interest cost on long dated maturities. Variable rate debt is advantageous insofar as it may help lower the overall cost of capital, and can be used in asset–liability matching strategies. However, variable rate debt introduces several risks that are not present in fixed rate debt including interest rate risk, refinancing risk, counterparty risk, and “demand risk”—the possibility that debt will need to be repaid or refinanced on short notice. There are many different types of variable rate debt; what they have in common is their exposure to some or all of the aforementioned risks. All else equal, we consider variable rate debt riskier than fixed rate debt.

- Mix of Fixed and Variable Rate Debt: we calculate the share of fixed rate and variable rate debt. Although we believe the use of some variable rate debt can be part of an effective hedging strategy we believe the risks of a 100% variable rate debt structure often outweigh the benefits; a 100% fixed rate debt structure is not considered risky.

- Monthly Liquidity to Demand Debt: measured as the ratio of monthly liquidity to demand debt. This ratio measures the degree to which there is sufficient monthly liquidity in the cash and investment portfolio to cover unexpected repayment of demand debt. A higher ratio indicates more coverage of demand debt.

- Refinancing Dates: we monitor the dates on which external financing agreements expire (examples include bank liquidity agreements, direct lending arrangements, or index put bonds). Staggering of expiration dates on these agreements prevents the hospital from being exposed to the simultaneous expiration of all external financing arrangements.
> **Counterparty Exposure:** we monitor the exposure to the hospital’s counterparties and lenders. Certain financial instruments like Variable Rate Demand Bonds may trade in the market based on the credit quality of the bank providing the liquidity facility. Diversity of bank counterparties on bank liquidity agreements and swaps is viewed as a credit positive.

> **Interest Rate Swaps:** we review the terms and collateral posting requirements of swap agreements. We evaluate several aspects of the swap program including: notional amount of swaps relative to debt, counterparty diversification, collateral posting requirements, and whether or not swaps are used to hedge risk of rising interest rates, or are used for more speculative purposes.

### 5b) Borrowing Terms and Covenants

Covenants are found in bond indentures, bank lending facilities, bank liquidity agreements, and other agreements. Penalties for covenant violations are often severe and may allow the lender to accelerate repayment, increase fees, or require additional collateral. Additionally, a covenant violation makes it less likely that bank liquidity agreements or direct lending arrangements will be renewed, or that the terms of renewal will be significantly less favorable to the hospital.

> **Headroom to Covenants:** we monitor compliance with covenants and calculate the degree of headroom to various covenants. For example, we assess how much operating performance would have to change in order to trip a financial covenant like Days Cash on Hand or Maximum Annual Debt Service Coverage. We also consider whether or not the hospital has access to other resources to meet covenants (ex: a parent hospital or university). A higher degree of headroom indicates more distance from the covenants.

> **Rating Triggers:** many agreements incorporate rating triggers that allow the lender to accelerate repayment or take other measures if the hospital is downgraded below a certain rating. Similar to the covenant analysis, we assess the likelihood of a downgrade below the rating trigger. Greater distance from the rating trigger suggests that the hospital is in good financial standing.

> **Repayment Terms:** we evaluate the repayment terms in the case where the hospital does have to repay the obligation sooner than expected. Repayment terms vary from immediate to several years. Terms that allow repayment over several years are viewed as introducing less potential credit stress than those requiring immediate repayment.

### 5c) Legal Security and Other Bondholder Protections

Indenture covenants provide a source of protection for holders of hospital debt. Strong covenants signal the organization’s commitment to abide by stated financial risk parameters over the long term. In contrast, a weak set of covenants may allow the hospital to unilaterally change any terms or conditions to the detriment of bondholders.

Legal security and indenture covenants take on greater importance when a hospital is in financial distress or files for bankruptcy. Because the vast majority of hospitals in Moody’s rated portfolio are initially rated investment grade, legal security and debt service reserve funds do not play a major role in the initial rating assignment. However, once a hospital enters financial distress, these factors take on significant roles in our rating assessment. Security provisions such as a mortgage lien and a gross revenue pledge can have a beneficial impact on bondholders’ recovery in the event of a bankruptcy filing.
» **Security Pledge:** we consider the strength of the security pledge. A pledge of gross revenues and a mortgage lien provides stronger protection for creditors than a general obligation pledge as it provides access to specific collateral.

» **Covenants that Protect Bondholders:** we believe covenants that protect bondholders, or provide certain rights in the event of a covenant violation provide stronger protection for bondholders. For example, financial covenants such as liquidity tests (typically days cash on hand) or rate covenants may allow bondholders to influence a hospital’s actions through the appointment of consultants.

» **Debt Service Reserve Fund:** presence of a debt service reserve fund; these reserves are more important for speculative grade borrowers as they may allow debt service to continue during periods of economic stress.

» **Debt Structure Risks:** the proliferation of other lending agreements such as bank direct lending programs, or the terms in other agreements like swap documents, can effectively subordinate long term bond holders. We review these terms and incorporate the likelihood of rapid repayment to other borrowers in our long term rating assignment.

### How to Apply the Rating Methodology with the Scorecard

As discussed in the beginning of the methodology, we are introducing a rating scorecard that generates grid implied ratings from the weighted average of the quantitative metrics. We then assess governance and management as well as debt structure and legal security. Based on historical rating practice and our opinion regarding the impact management and governance and debt structure has on credit quality, our evaluation of these factors can result in up to a three notch rating differential from the output of the quantitative grid. These factors provide equal, if not greater, insight into the long-term credit quality of a hospital. We also incorporate credit specific considerations into our analysis that are not otherwise captured in the quantitative grid or the qualitative factors that can account for additional variation from the grid indicated rating. Examples of this would include: multi-year trends in key ratios or patient volume statistics, market share and competitive dynamics, and other issues.

### Quantitative Indicators: Factors 1, 2 and 3

The grid provides guidance for the quantitative factors that are generally most important in assigning ratings to hospitals and health systems. It is a summary that does not include every rating consideration. The weights shown for each factor in the grid represent an approximation of their typical importance for rating decisions but actual importance may vary significantly. Accordingly, we do not expect the grid-indicated rating to precisely match the actual rating in most cases. This is particularly true for speculative grade borrowers, where qualitative factors weigh heavily in rating outcomes.

The grid (see Appendix A) contains ten indicators with values mapped to a broad rating category based on the distribution of values in Moody’s current rated portfolio. All of the quantitative metrics incorporate Moody’s standard adjustments to a hospital’s balance sheet, income statement, and cash flow statement (discussed in detail below). The weighted average of the sub-factor ratings produces a grid-indicated rating for each factor. We convert each of the ten sub-factors into numeric values based on the scale below.
Qualitative Indicators: Factors 4 and 5

Our assessment of a hospital’s governance and management, together with the legal security on its debt obligations and its debt structure, can account for up to a three notch differential in total from the output of the quantitative grid. Using the indicators outlined, we evaluate whether these factors have a positive, neutral, or negative impact on the hospital’s credit profile and adjust the rating outcome accordingly.

We may incorporate individual credit specific considerations into our analysis that are not otherwise captured in the quantitative grid or common qualitative factors. Examples of other factors include multi-year trends in key metrics or event risks such as legal judgments, security incidents, or natural disasters. Our evaluation is aided by comparative assessments across the not-for-profit healthcare industry derived from our extensive market coverage of hospitals in the United States.

The weight, or importance, of the qualitative sub-factors can vary based on the particular credit profile and circumstances under review. Extraordinary strength or weakness in a key sub-factor may dominate the others in light of the particular credit conditions. For example, our analysis of governance and management is particularly important when a hospital is facing strategic change, including: embarking on a major expansion of programs or buildings, initiating a significant new borrowing or fundraising campaign, undergoing financial stress or facing a weakening market position, or experiencing high turnover in senior management. In our published rating reports, we provide discussion of our assessment of these stresses or strategic challenges to explain our rating opinions. The depth of the discussion and points of emphasis will vary based on the particular credit issues facing the hospital and the importance of those issues to the rating.
Moody's Related Research

The preceding discussion describes the principal methodology used to derive ratings within Not-for-Profit Healthcare. The documents listed below describe additional guidance that may be applicable to specific securities or issuers within the Not-for-Profit Healthcare sector, or to a wide range of securities or issuers across multiple sectors.

Rating Implementation Guidance:

» The Role of Bond Covenants in Municipal Finance Credit Analysis, June 2005 (93039)
» Moody's Updated Methodology to Rating Human Service Providers, June 2000 (56810)
» Moody's Rating Methodology for Senior-Subordinated Debt Structures for Not-for-Profit Hospitals, March 2005 (91866)
» Hidden Risks of Variable Rate Debt, March 2004 (81480)
» Bank Liquidity Support and Variable Rate Financings Can Impact Underlying Long Term Credit Ratings, December 2008 (107262)
» Rating Methodology for Municipal Bonds and Commercial Paper Supported By a Borrower’s Self-Liquidity, January 2012 (138091)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.
## Appendix A: Scorecard

### U.S. Not-For-Profit Healthcare Scorecard

<table>
<thead>
<tr>
<th>Sub-Factor Weights</th>
<th>Value</th>
<th>Score</th>
<th>Implied Rating</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 1: Market Position (45%)</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Total Revenue ($000's)</td>
<td>25%</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Revenue Growth Rate (%) (3 yr CAGR)</td>
<td>10%</td>
<td></td>
<td></td>
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<tr>
<td>Medicare and Medicaid payer mix (% of Gross Revenues)</td>
<td></td>
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</tr>
<tr>
<td>Medicare</td>
<td>5%</td>
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<td></td>
</tr>
<tr>
<td>Medicaid</td>
<td>5%</td>
<td></td>
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<tr>
<td><strong>Factor 2: Operating Performance (30%)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Cash Flow Margin (%)</td>
<td>10%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt to Cash Flow (x)</td>
<td>10%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>MADS Coverage (x)</td>
<td>10%</td>
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<tr>
<td><strong>Factor 3: Balance Sheet and Capital Plan (25%)</strong></td>
<td></td>
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<tr>
<td>Days Cash on Hand (x)</td>
<td>10%</td>
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<tr>
<td>Cash to Debt (%)</td>
<td>10%</td>
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<td></td>
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<tr>
<td>Monthly Liquidity to Demand Debt (%)</td>
<td>5%</td>
<td></td>
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</tr>
<tr>
<td><strong>Factors 4 &amp; 5: Governance, Management, Debt Structure and Other Debt Structure Specific Considerations</strong></td>
<td>Positive, Negative, or Neutral</td>
<td>Analyst Notching (+/-)</td>
<td>Weighted Score:</td>
<td>Overall Rating</td>
</tr>
<tr>
<td>4) Governance and Management</td>
<td></td>
<td></td>
<td>Grid Rating</td>
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<tr>
<td>a. Composition of Board and Senior Management</td>
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<tr>
<td>b. External Disclosures and Internal Controls</td>
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<tr>
<td>c. Integrated Short and Long-Range Planning</td>
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<tr>
<td>d. Ongoing Self-Assessment and Benchmarking</td>
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<tr>
<td>e. Government and Stakeholder Relations</td>
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<tr>
<td>5) Debt Structure and Legal Covenants</td>
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</tr>
<tr>
<td>a. Interest Rate, Counterparty, and Refinancing Risk</td>
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<tr>
<td>b. Borrowing Terms and Covenants</td>
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<tr>
<td>c. Legal Security and Other Bondholder Protections</td>
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<tr>
<td>Other Credit Specific Considerations</td>
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<td></td>
</tr>
<tr>
<td>a. Multi-year Trend in Key Operating and Balance Sheet Factors</td>
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<tr>
<td>b. Ownership and Support by University or State/Local Government</td>
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<tr>
<td>c. Presence or Absence of CON</td>
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<tr>
<td>d. Market Share</td>
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<td></td>
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<tr>
<td>e. Other Factors (ex: Comprehensive Debt)</td>
<td></td>
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<tr>
<td><strong>Net Notching</strong></td>
<td></td>
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<td>0.0</td>
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</tr>
</tbody>
</table>
Appendix B: Standard Adjustments

Standard Financial Practices and Adjustments
We are often asked about what materials we review when assigning an initial rating or performing surveillance on existing ratings. Below we provide an overview of what materials we review and any adjustments we make to financial statements.

Mechanics of Financial Analysis
Our analysis of operating performance begins with a review of audited financial performance. We make a variety of adjustments to the audited financial statements in order to isolate core operating performance and reclassify items that are reported differently among organizations. We also review hospital budgets and projections in order to analyze project feasibility.

» System vs. Obligated Group: many hospitals and health systems create subsets of entities—referred to as the obligated group—to be legally obligated to pay debt service and for the purposes of debt covenant compliance. Our analysis considers the results of the entire health system and not just the obligated group. The obligated group frequently excludes core (and loss making) operations of the health system and in our experience the hospital will subsidize the losses at non-obligated members. The most commonly excluded component are employed physician practices.

» Standard Adjustments: we remove investment income and fundraising from operating revenue. For hospitals that report under GASB, we add bad debt expense to revenues and expenses. In FY 2012 we will begin to report bad debt as a revenue deduction, in preparation for the change in FASB accounting rules.

» Adjustments for One-Time Items: we make adjustments for one-time, non-recurring revenue and expense items. Typical one-time revenues include: asset sales, insurance settlements, and favorable lawsuit settlements. Typical one-time expenses include: extraordinary consulting fees and restructuring costs.

» Analysis of Interim Results: healthcare is a fast paced industry and changes to payer mix or patient utilization can take place quickly. We often assign and monitor ratings in the middle of a hospital’s fiscal year and we may make rating changes based on interim results.

» Analysis of Budgets: we request operating and capital budgets annually. We review annual budgets in order to make an assessment of management’s planning and ability to react to changing circumstances.

» Analysis of Projections: We expect management to provide multi-year projections when undertaking a large capital project, or executing a change in strategy. Projections are used to gauge a project’s feasibility and to provide a benchmark in future reviews.

Comparisons to Peer Organizations
Moody’s regularly benchmarks hospital performance to peer organizations. We have detailed financial and patient utilization data on 533 rated health systems that we use to compare hospitals’ performance to one another.

6 Fundraising revenue is included for Children’s Hospitals and certain specialty hospitals with a demonstrated history of large annual donations.
Appendix C: Definitions

Definitions of Ratios and Metrics for Factors 1 – 3 (Quantitative Scorecard)

Market Position

Revenue Base: defines the scope of a hospital’s operations and gives an indication of the number of patients served and diversity of programs and revenue sources. A larger revenue base indicates greater stability and clout in negotiations with healthcare insurance companies and suppliers.

Net patient service revenue plus other operating revenue plus net assets released for operations. Excludes investment income and fundraising except in rare circumstances.

Revenue Growth Rate: the cost of providing healthcare continues to grow at a higher rate than general economic growth. The CAGR is used to measure a hospital’s ability to grow revenue by increasing patient volume, and generating reimbursement increases from healthcare insurance companies. It is a preferred metric to measure the growth in patient services because it captures inpatient as well as outpatient volume and the effect of increases in reimbursement.

3yr CAGR = (Current year operating revenue divided by operating revenue from three years ago)^(1/3) – 1

Ex: (Rev2011/Rev2008) ^ (1/3) -1

Payer Mix: reflects the share of patients whose health insurance is either Medicare or Medicaid.

Based on gross charges, measured by the share of patients with Medicare or Medicare HMO and Medicaid or Medicaid HMO insurance

Operating Performance

Operating Cash Flow Margin: measures the level of cash flow from operations that is available to cover principal and interest payments on debt.

Operating surplus (or deficit) plus depreciation expense plus interest expense divided by total operating revenue.

Debt-to-Cash Flow: measures the time in years it would take to repay the hospital’s debt if all cash flow were directed to debt repayment.

Long-term debt plus short-term debt divided by excess of revenues over expenses plus depreciation and amortization expenses

Maximum Annual Debt Service Coverage: measures a hospital’s ability to cover peak debt service.

Net revenue available for debt service divided by estimated future peak principal payments and interest expense

Balance Sheet

Days Cash on Hand: measures the number of days a hospital could continue paying its operating expenses from existing unrestricted investments in the absence of any future cash inflow.
Unrestricted cash and investments times 365 divided by total operating expenses less depreciation and amortization expenses

**Cash to Debt:** a measure of leverage. A larger ratio indicates a greater balance sheet cushion, lower leverage, and greater debt capacity.

Unrestricted cash and investments divided by long term debt plus short term debt

**Monthly Liquidity to Demand Debt:** measures the ratio of investments with monthly liquidity to demand debt.

Monthly liquidity divided by demand debt.
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