CASE

# 30

# ST. BENEDICT'S TEACHING HOSPITAL

## MERGER ANALYSIS

THE PATIENT BASE of Lafayette County, Indiana, is currently served by three hospitals: (1) St. Benedict's Teaching Hospital, a not-for-profit, university-related hospital with 525 beds; (2) Wabash Regional Medical Center, a 250-bed for-profit hospital owned by Hospital Associates of America (HAA), a national chain; and (3) Lafayette General, a 400-bed, not-for-profit, acute care hospital owned by Hoosier Healthcare. St. Benedict's and Lafayette are located less than one mile from one another, while Wabash Regional is about five miles away from St. Benedict's, in a newer and more rapidly developing section of the county.

The service area has a total of 1,175 licensed beds, or about 3.5 beds per 1,000 population, which is higher than the national average of about 2.4 beds per 1,000 and much higher than the roughly 2 beds per 1,000 needed under an aggressive utilization management program. Of course, as a tertiary care facility, St. Benedict's receives patients from throughout the state, but the bulk of its patients still come from the local five-county area.

With an excess of hospital beds in the service area, the status quo may not survive the changing healthcare environment. Indeed, Lafayette General has had some tough years recently, as evidenced by its number of discharges, which have fallen to 11,412 in 2017 from 12,055 in 2016 and 12,824 in 2015. In addition, HAA has been aggressive in building market share in other areas of Indiana through both acquisitions and hospital expansions. With these factors in place, some consolidation in the local hospital market will likely take place, and the most likely result is the acquisition of Lafayette General by either St. Benedict's or HAA.

Lafayette General operated as a county hospital for more than 50 years and hence developed a reputation for providing healthcare services to the poor. After many years of operating losses, the county concluded that it could no longer afford to operate the hospital. In 1987, the county sold the hospital for $1 to Hoosier Healthcare, a not-for-profit managed care organization and provider, which by 2017 had become the state's largest integrated healthcare company.

Hoosier Healthcare's major business line is managed care. Its numerous plans (including health maintenance organization, preferred provider organization, point of service, Medicare, and Medicaid plans) serve more than 1 million members in 25 Indiana counties, encompassing all of the state's major metropolitan areas. In addition to managed care plans, Hoosier Healthcare owns seven different providers: two acute care hospitals (including Lafayette General), one rehabilitation hospital, one mental health facility, one hospice, one home health care agency, and one retirement community.

Lafayette General is the flagship of Hoosier Healthcare's provider network, and the company has kept the hospital in excellent condition in spite of falling inpatient utilization. In fact, Lafayette General recently built the state-of-the-art HeartCare Center and the modern MaternityCare Center. Furthermore, Lafayette General operates a full-service emergency department and a medical helicopter service.

In response to the current situation, St. Benedict's has formed a special committee to consider the feasibility of making an offer to Hoosier Healthcare to acquire Lafayette General. The committee's primary goals are as follows:

1. To place a dollar value on Lafayette General's equity (fund) capital, assuming that the hospital will be acquired and operated by St. Benedict's
2. To develop a financing plan for the acquisition

In addition, the committee has been asked to consider two other issues related to the potential acquisition:

1. What is the best organizational structure for a combined enterprise? Currently, both Lafayette General and St. Benedict's have separate boards of directors and management staffs. Of

course, currently the senior members of the Lafayette General board are also Hoosier Healthcare officers.

2. Should the medical staffs of the two hospitals be integrated, and, if so, in what way? The medical staff of Lafayette General consists of local physicians, including many family practice physicians, whereas the medical staff at St. Benedict's is almost entirely made up of specialists, and all are members of the local university's College of Medicine with responsibilities that go well beyond clinical practice.

A new committee will be formed to finalize recommendations on these issues should St. Benedict's management agree to move forward with the acquisition offer, but some preliminary judgments are needed at this time. As a starting point in the valuation analysis, the committee has obtained historical income statement and balance sheet data on both hospitals. Exhibit 30.1 contains the data for Lafayette General, and exhibit 30.2 provides the data for St. Benedict's. Both sets of statements are abbreviated but still contain the data considered to be most relevant to the analysis. In addition, relevant comparative data are presented in exhibit 30.3 and relevant market data are shown in exhibit 30.4. (Assume that the data in exhibits 30.3 and 30.4 reflect late-2017 conditions.)

One of the toughest tasks that the committee faces is the development of Lafayette General's pro forma (forecasted) cash flow statements, which form the basis of the discounted cash flow valuation. Several basic questions must be answered before any numbers can be generated. First, what synergies, if any, can be realized from the merger, and how long will it take for such synergies to develop? For example, can duplications be eliminated? Both hospitals have "mercy flight" helicopters and offer full emergency department services, even though the two hospitals are only one mile apart. What is the impact of such operational changes on revenues and costs and hence on the net cash flows that Lafayette General's assets can produce? Second, once the consolidation takes place and all synergies have been realized, what is the long-term growth prospect for Lafayette General's cash flows? Third, what impact would the acquisition have on St. Benedict's own cash flows? Any change in St. Benedict's revenues or costs that results from the acquisition must be included in the analysis. The answers to these questions and others form the basis for the pro forma cash flow statements.

You are the chair of the special committee formed at St. Benedict's to evaluate the potential acquisition. You must present your findings and recommendations to the hospital's board of directors. Because the case contains far less information than normally available in a merger analysis, especially when the potential merger is friendly, you must make many difficult assumptions to complete your analysis. Although you do not know much about Lafayette General's local market, you do know the current trends in the healthcare industry. Use this knowledge to help make judgments about the case. The quality of many, if not most, real-world financial analyses depends more on the validity of the underlying assumptions than on the theoretical "correctness" of the analytical techniques.

Note that there is no preferred solution to this case, so your case analysis will be judged as much on the assumptions used in the analysis as on the analysis itself. Finally, remember that numerous risk analysis techniques are available that can be used to give decision makers some feel for the risks involved.

**EXHIBIT 30.1**
**Lafayette General: Historical Financial Statements (in Millions of Dollars)**

| | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| *Income Statements* | | | | | |
| Inpatient revenue | $ 42.472 | $ 46.014 | $ 53.410 | $ 58.650 | $ 59.513 |
| Outpatient revenue | 28.314 | 30.676 | 35.606 | 39.100 | 39.675 |
| Net patient service revenue | $ 70.786 | $ 76.690 | $ 89.016 | $ 97.750 | $ 99.188 |
| Nonoperating revenue | 1.922 | 1.515 | 1.367 | 1.725 | 1.048 |
| Total revenues | $ 72.708 | $ 78.205 | $ 90.383 | $ 99.475 | $100.236 |
| Patient services expenses | $ 60.245 | $ 73.858 | $ 81.525 | $ 90.645 | $ 89.505 |
| Interest expense | 3.045 | 3.147 | 3.093 | 3.002 | 2.980 |
| Depreciation | 3.466 | 3.689 | 4.395 | 4.258 | 6.031 |
| Total expenses | $ 66.756 | $ 80.694 | $ 89.013 | $ 97.905 | $ 98.516 |
| Net income | $ 5.952 | ($ 2.489) | $ 1.370 | $ 1.570 | $ 1.720 |
| *Balance Sheets* | | | | | |
| Cash and investments | $ 2.388 | $ 1.538 | $ 0.162 | $ 0.185 | $ 0.198 |
| Accounts receivable | 18.860 | 20.581 | 20.821 | 21.570 | 16.732 |
| Other current assets | 4.539 | 8.475 | 4.669 | 2.585 | 2.898 |
| Total current assets | $ 25.787 | $ 30.594 | $ 25.652 | $ 24.340 | $ 19.828 |
| Gross plant and equipment | $102.596 | $116.694 | $122.611 | $133.499 | $146.130 |
| Accumulated depreciation | 27.243 | 30.505 | 34.900 | 39.158 | 45.189 |
| Net plant and equipment | $ 75.353 | $ 86.189 | $ 87.711 | $ 94.341 | $100.941 |
| Total assets | $101.140 | $116.783 | $113.363 | $118.681 | $120.769 |
| Current liabilities | $ 9.182 | $ 13.584 | $ 5.771 | $ 10.689 | $ 11.431 |
| Long-term debt | 33.572 | 47.302 | 50.325 | 49.155 | 48.781 |
| Total liabilities | $ 42.754 | $ 60.886 | $ 56.096 | $ 59.844 | $ 60.212 |
| Fund balance | 58.386 | 55.897 | 57.267 | 58.837 | 60.557 |
| Total claims | $101.140 | $116.783 | $113.363 | $118.681 | $120.769 |

**EXHIBIT 30.2**
**St. Benedict's Teaching Hospital: Historical Financial Statements (in Millions of Dollars)**

| | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| *Income Statements* | | | | | |
| Inpatient revenue | $170.195 | $198.137 | $221.826 | $226.944 | $251.935 |
| Outpatient revenue | 34.225 | 39.517 | 46.828 | 56.226 | 65.507 |
| Net patient service revenue | $204.420 | $237.654 | $268.654 | $283.170 | $317.442 |
| Nonoperating revenue | 5.587 | 8.899 | 12.193 | 22.672 | 9.979 |
| Total revenues | $210.007 | $246.553 | $280.847 | $305.842 | $327.421 |
| Patient services expenses | $178.788 | $207.596 | $231.673 | $254.704 | $277.938 |
| Interest expense | 9.232 | 10.468 | 11.983 | 10.691 | 9.997 |
| Depreciation | 13.289 | 16.637 | 19.621 | 23.286 | 26.489 |
| Total expenses | $201.309 | $234.701 | $263.277 | $288.681 | $314.424 |
| Net income | $ 8.698 | $ 11.852 | $ 17.570 | $ 17.161 | $ 12.997 |
| *Balance Sheets* | | | | | |
| Cash and investments | $ 17.918 | $ 19.862 | $ 24.660 | $ 27.726 | $ 25.220 |
| Accounts receivable | 66.212 | 72.989 | 99.867 | 100.297 | 97.494 |
| Other current assets | 12.315 | 16.771 | 20.741 | 20.542 | 22.757 |
| Total current assets | $ 96.445 | $109.622 | $145.268 | $148.565 | $145.471 |
| Gross plant and equipment | $348.288 | $341.064 | $335.313 | $362.152 | $400.546 |
| Accumulated depreciation | 75.139 | 76.575 | 90.056 | 109.468 | 123.567 |
| Net plant and equipment | $273.149 | $264.489 | $245.257 | $252.684 | $276.979 |
| Total assets | $369.594 | $374.111 | $390.525 | $401.249 | $422.450 |
| Current liabilities | $ 42.437 | $ 35.061 | $ 39.511 | $ 37.733 | $ 39.817 |
| Long-term debt | 146.997 | 147.038 | 141.432 | 136.773 | 142.893 |
| Total liabilities | $189.434 | $182.099 | $180.943 | $174.506 | $182.710 |
| Fund balance | 180.160 | 192.012 | 209.582 | 226.743 | 239.740 |
| Total claims | $369.594 | $374.111 | $390.525 | $401.249 | $422.450 |

*Note:* The hospital's current target cash balance is $5 million.

EXHIBIT 30.3
Selected Comparative Data

| | Lafayette | St. Benedict's |
|---|---|---|
| Average age of plant | 6.8 years | 8.5 years |
| Licensed beds | 400 | 525 |
| Occupancy rate | 52.7% | 64.2% |
| Average length of stay | 5.5 days | 6.6 days |
| Number of discharges | 11,412 | 19,748 |
| Medicare percent | 57.2% | 29.7% |
| Medicaid percent | 10.3% | 13.0% |
| Medicare case mix index | 1.51 | 2.13 |
| Gross price per discharge | $11,688 | $20,204 |
| Net price per discharge | $5,850 | $12,757 |
| Cost per discharge | $5,703 | $12,144 |

EXHIBIT 30.4
Selected Market and Hospital Data

*US Treasury Yield Curve*

| Maturity | Interest Rate |
|---|---|
| 6 months | 3.0% |
| 1 year | 3.5 |
| 5 years | 3.9 |
| 10 years | 4.5 |
| 20 years | 5.0 |
| 30 years | 5.1 |

*Market Risk Premium*

| | |
|---|---|
| Historical risk premium | 7.0% |
| Average current risk premium as forecasted by three investment banking firms | 6.0% |

*Market Betas, Capitalization, and Tax Rates of Two Publicly Traded Hospital Companies*

| Company | Beta | Debt/Asset Ratio | Tax Rate |
|---|---|---|---|
| Provident Healthcare | 1.1 | 50% | 40% |
| National Health Company | 1.2 | 65% | 43% |

(continued)

**EXHIBIT 30.4 (continued) Selected Market and Hospital Data**

*Ratio of Stock Price to EBITDA per Share*

| | |
|---|---|
| Provident Healthcare | 8.5 |
| National Health Company | 7.5 |

*Ratio of Total Equity Market Value to Number of Discharges*

| | |
|---|---|
| Provident Healthcare | $8,000 |
| National Health Company | $7,000 |

*Proportion of Cash to Current Assets*

| | |
|---|---|
| Large hospital average | 5.0% |

*Days Cash on Hand*

| | |
|---|---|
| Large hospital average | 22 days |
| St. Benedict's | 31 days |

EBITDA: Earnings before interest, taxes, depreciation, and amortization

*Note:* The data in this exhibit are for use in this case only and do not necessarily reflect current market data.