

RIVERVIEW COMMUNITY HOSPITAL (A)

ASSESSING HOSPITAL PERFORMANCE

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RIVERVIEW COMMUNITY HOSPITAL is a 210-bed, not-for-profit, acute care hospital with a long-standing reputation for providing quality healthcare services to a growing service area. Riverview competes with three other hospitals in its metropolitan statistical area (MSA)—two not-for-profit and one for-profit. It is the smallest of the four but has traditionally been ranked highest in patient satisfaction polls.

Hospitals are accredited by the Joint Commission, an independent not-for-profit organization whose mission is to improve the safety and quality of healthcare provided to the public through accreditation and related services. (For more information on the Joint Commission, visit their website at www.jointcommission.org.) Although accreditation is optional for hospitals, it is generally required to qualify for governmental (Medicare and Medicaid) reimbursement, and hence the vast majority of hospitals apply for accreditation. Riverview passed its latest Joint Commission accreditation with “flying colors,” receiving full accreditation, the highest of the accreditation categories.

In recent years, competition among the four hospitals in Riverview’s service area has been keen but friendly. However, a large for-profit chain recently purchased the for-profit hospital, which has resulted in some anxiety among the managers of the other three hospitals because of the chain’s reputation for aggressively increasing market share in the markets they serve.

Relevant financial and operating data for Riverview are contained in Exhibits 1.1 through 1.4, and selected industry data are contained in

Exhibits 1.5 and 1.6. (Note that the industry data given in the case are for illustrative purposes only and do not represent actual data for the years specified. For a better idea of the type of comparative data actually available for hospitals, see the Ingenix website at www.hospitalbenchmarks.com.)

In addition to the data in the exhibits, the following information was extracted from the notes section of Riverview's 2009 Annual Report.

1. A significant portion of the hospital's net patient service revenue was generated by patients who are covered by either Medicare, Medicaid, or other government programs or by various private plans, including managed care plans, that have contracts with the hospital that specify discounts from charges. In general, the proportional amount of deductions is similar between inpatients and outpatients. The gross/net revenue breakdown for both inpatient and outpatient services is as follows (in millions of dollars):

	2005	2006	2007	2008	2009
Gross patient service revenue					
Inpatient	\$25.161	\$25.275	\$26.117	\$29.148	\$33.216
Outpatient	4.748	5.969	6.535	9.130	11.912
Gross patient revenue	<u>\$29.909</u>	<u>\$31.244</u>	<u>\$32.652</u>	<u>\$38.278</u>	<u>\$45.128</u>
Revenue deductions					
Contractual allowances	\$ 2.489	\$ 2.053	\$ 1.729	\$ 5.196	\$ 7.516
Charity care	1.759	1.955	2.127	2.506	3.030
Total deductions	<u>\$ 4.248</u>	<u>\$ 4.008</u>	<u>\$ 3.856</u>	<u>\$ 7.702</u>	<u>\$10.546</u>
Net patient service revenue	<u>\$25.661</u>	<u>\$27.236</u>	<u>\$28.796</u>	<u>\$30.576</u>	<u>\$34.582</u>

2. Inventories are stated at the lower of costs—determined on a first-in, first-out basis—or market value.
3. The breakdown of operating expenses between inpatient and outpatient activities is as follows (in millions of dollars):

	2005	2006	2007	2008	2009
Inpatient expenses	\$18.635	\$19.221	\$20.573	\$22.229	\$24.771
Outpatient expenses	<u>5.261</u>	<u>6.062</u>	<u>6.831</u>	<u>8.098</u>	<u>9.187</u>
Total operating expenses	<u>\$23.896</u>	<u>\$25.283</u>	<u>\$27.404</u>	<u>\$30.327</u>	<u>\$33.958</u>

4. Riverview has a contributory money accumulation (defined contribution) pension plan that covers substantially all of its employees. Participants can contribute up to 20 percent of earnings to the pension plan. The hospital matches, on a dollar-for-dollar basis, employee contributions of up to 2 percent of wages and pays 50 cents on the dollar for contributions of more than 2 percent and up to 4 percent. Because the plan is a defined contribution plan (as opposed to a defined benefit plan), there are no unfunded pension liabilities. Pension expense was approximately \$0.543 million in 2008 and \$0.588 million in 2009.
5. The hospital is a member of the State Hospital Trust Fund under which it purchases professional liability insurance coverage for individual claims up to \$1 million (subject to a deductible of \$100,000 per claim). Riverview is self-insured for amounts above \$1 million but less than \$5 million. Any liability award in excess of \$5 million is covered by a commercial liability policy; for example, the policy pays \$2 million on a \$7 million award. The hospital is currently involved in eight suits involving claims of various amounts that could ultimately be tried before juries. Although it is impossible to determine the exact potential liability in these claims, management does not believe that the settlement of these cases would have a material effect on the hospital's financial position.

Assume that you have just joined the staff of Riverview Community Hospital as a special assistant to the CEO. On your first day on

the job, the CEO, Melissa Randolph, stated that the best way to get to know the financial and operating condition of the hospital is to conduct a thorough financial statement and operating indicator analysis; thus, she assigned you the task. Although you also believe that this is a good way to get started, you wonder whether Melissa has any ulterior motives. Perhaps the hospital is having problems and she thinks that you can spot them or perhaps she wants to test your analytical skills. Melissa is from the “old school” of hospital management and has been looking for someone to bring modern management methods to the hospital.

In any event, she has already scheduled a financial and operating performance analysis presentation at the next board of trustees meeting as a way for you to meet the board members. To help you structure your presentation, Melissa suggested that you make the following points:

1. Interpret the hospital’s statements of cash flows.
2. Present an overview of the hospital’s financial position using the Du Pont equation as a guide.
3. Use ratio analysis to identify the hospital’s specific financial strengths and weaknesses. But, she warned, the board is not going to appreciate a lengthy dialogue with too many individual ratios. Focus on key findings and one or two ratios per category—don’t put them to sleep! Also, use graphs or other techniques to summarize the data.
4. Use operating indicator analysis to identify the operational factors that explain the hospital’s current financial condition.
5. Summarize your evaluation of the hospital’s financial condition. However, **don’t just rehash the numbers**; rather, present your views on the potential underlying economic and managerial factors that might have caused any problems that surfaced in the financial and operating analysis.
6. Make any recommendations that you believe the hospital should follow to ensure future financial soundness.

In preparing for the presentation, several relevant factors came to light. First, in reviewing the policy decisions made by Riverview's board of trustees over the past decade, you found out that in 2004 the board made the decision to significantly expand the hospital's outpatient services. The rationale was that many procedures that historically were done on an inpatient basis were now being done in an outpatient setting, and if Riverview did not offer such services it would lose the patients to other providers.

Second, you discovered that board members were complaining that too much time is being spent at quarterly board meetings discussing the hospital's financial condition. "There is so much to accomplish," said one member, "that we just don't have the time to consider a large number of ratios at each meeting."

You know that many healthcare providers are now using dashboards to focus on key performance indicators (KPIs). A dashboard is nothing more than a way to summarize an organization's financial and operating performance. Of course, the name stems from an automobile's dashboard, which contains gauges that give drivers essential information about the car's performance and operating condition. Thus, you plan to develop two dashboards, each containing **no more than five KPIs**. One dashboard will use financial ratios to focus on financial performance, while the other will use operating indicator ratios to focus on operating performance. You plan to present your recommendations for the contents of these dashboards, along with the rationale for the ratios chosen, at the board meeting. Your ultimate goal is to replace the full financial and operating performance discussion at future board meetings with a limited discussion of the KPIs.

The day before your presentation, Melissa stopped you in the hallway. In addition to asking if you are ready to go, she asked whether or not the board should be concerned about the hospital's annual economic value added (EVA) performance. Apparently, she just read an article in *Fortune* magazine that discusses this measure of managerial performance. (For more information on EVA, as well as market value added [MVA], see the Stern Stewart & Co. website at www.eva.com.) Then she said, "By the way, our overall (corporate) cost of capital is 10 percent." You are not quite sure why she passed that information on to you, but you jotted it down just in case.

EXHIBIT 1.1
Riverview Community
Hospital: Statements
of Operations
(millions of dollars)

	2005	2006	2007	2008	2009
<i>Revenues</i>					
Net patient service revenue	\$25.661	\$27.236	\$28.796	\$30.576	\$34.582
Other revenue	<u>1.305</u>	<u>1.261</u>	<u>1.237</u>	<u>1.853</u>	<u>1.834</u>
Total revenues	<u>\$26.966</u>	<u>\$28.497</u>	<u>\$30.033</u>	<u>\$32.429</u>	<u>\$36.416</u>
<i>Expenses</i>					
Salaries and wages	\$10.829	\$11.135	\$12.245	\$12.468	\$13.994
Fringe benefits	1.496	1.731	1.830	2.408	2.568
Interest expense	1.341	1.305	1.181	1.598	1.776
Depreciation	1.708	1.977	2.350	2.658	2.778
Provision for bad debts	0.546	0.589	0.622	0.655	0.776
Professional liability	0.102	0.157	0.140	0.201	0.218
Other	<u>7.874</u>	<u>8.389</u>	<u>9.036</u>	<u>10.339</u>	<u>11.848</u>
Total expenses	<u>\$23.896</u>	<u>\$25.283</u>	<u>\$27.404</u>	<u>\$30.327</u>	<u>\$33.958</u>
Excess of revenues over expenses	<u>\$ 3.070</u>	<u>\$ 3.214</u>	<u>\$ 2.629</u>	<u>\$ 2.102</u>	<u>\$ 2.458</u>

EXHIBIT 1.2
Riverview Community
Hospital: Balance Sheets
(millions of dollars)

	2005	2006	2007	2008	2009
<i>Assets</i>					
Cash and investments	\$ 3.513	\$ 5.799	\$ 4.673	\$ 5.069	\$ 2.795
Accounts receivable (net)	5.915	4.832	4.359	5.674	7.413
Inventories	0.338	0.403	0.432	0.523	0.601
Other current assets	0.693	0.294	0.308	0.703	0.923
Total current assets	<u>\$10.459</u>	<u>\$11.328</u>	<u>\$ 9.772</u>	<u>\$11.969</u>	<u>\$11.732</u>
Gross plant and equipment	\$37.999	\$42.005	\$47.786	\$55.333	\$59.552
Accumulated depreciation	8.831	10.092	11.820	14.338	17.009
Net plant and equipment	<u>\$29.168</u>	<u>\$31.913</u>	<u>\$35.966</u>	<u>\$40.995</u>	<u>\$42.543</u>
Total assets	<u><u>\$39.627</u></u>	<u><u>\$43.241</u></u>	<u><u>\$45.738</u></u>	<u><u>\$52.964</u></u>	<u><u>\$54.275</u></u>
<i>Liabilities and Net Assets</i>					
Accounts payable	\$ 1.068	\$ 1.273	\$ 0.928	\$ 1.253	\$ 1.760
Accruals	0.692	0.942	1.460	1.503	1.176
Current portion of LT debt	0.136	0.290	0.110	1.341	1.465
Total current liabilities	<u>\$ 1.896</u>	<u>\$ 2.505</u>	<u>\$ 2.498</u>	<u>\$ 4.097</u>	<u>\$ 4.401</u>
Long-term debt	15.959	15.775	15.673	19.222	17.795
Net assets	<u>21.772</u>	<u>24.961</u>	<u>27.567</u>	<u>29.645</u>	<u>32.079</u>
Total liabilities					
and net assets	<u><u>\$39.627</u></u>	<u><u>\$43.241</u></u>	<u><u>\$45.738</u></u>	<u><u>\$52.964</u></u>	<u><u>\$54.275</u></u>

EXHIBIT 1.3
Riverview Community
Hospital: Statements
of Cash Flows
(millions of dollars)

	2006	2007	2008	2009
<i>Cash Flows from Operating Activities</i>				
Income from operations	\$3.214	\$2.629	\$2.102	\$2.458
Noncash expenses	1.952	2.326	2.633	2.756
Change in accounts receivable	1.083	0.473	(1.315)	(1.739)
Change in inventories	(0.065)	(0.029)	(0.091)	(0.078)
Change in other current assets	0.399	(0.014)	(0.395)	(0.220)
Change in accounts payable	0.205	(0.345)	0.325	0.507
Change in accruals	0.250	0.518	0.043	(0.327)
Change in current portion of LT debt	<u>0.154</u>	<u>(0.180)</u>	<u>1.231</u>	<u>0.124</u>
Net cash flow from operations	<u>\$7.192</u>	<u>\$5.378</u>	<u>\$4.533</u>	<u>\$3.481</u>
<i>Cash Flows from Investing Activities</i>				
Fixed asset acquisitions	<u>(\$4.722)</u>	<u>(\$6.402)</u>	<u>(\$7.686)</u>	<u>(\$4.328)</u>
<i>Cash Flows from Financing Activities</i>				
Increase (decrease) in LT debt	<u>(\$0.184)</u>	<u>(\$0.102)</u>	<u>\$3.549</u>	<u>(\$1.427)</u>
Net increase (decrease) in cash	<u>\$2.286</u>	<u>(\$1.126)</u>	<u>\$0.396</u>	<u>(\$2.274)</u>
Beginning cash and investments	<u>\$3.513</u>	<u>\$5.799</u>	<u>\$4.673</u>	<u>\$5.069</u>
Ending cash and investments	<u>\$5.799</u>	<u>\$4.673</u>	<u>\$5.069</u>	<u>\$2.795</u>

LT: long term

Note: The noncash expenses and fixed asset acquisitions data in the statements of cash flows are somewhat different than they would be if calculated directly from the other financial statements because of asset revaluations.

EXHIBIT 1.4
Riverview Community
Hospital: Selected
Operating Data

	2005	2006	2007	2008	2009
Medicare discharges	3,008	2,960	2,721	2,860	2,741
Total discharges	9,680	9,311	8,784	8,318	8,576
Outpatient visits	30,754	31,960	32,285	32,878	36,796
Licensed beds	210	210	210	210	210
Staffed beds	192	196	193	197	178
Patient days	45,296	45,983	44,085	42,434	40,062
Case mix index	1.2531	1.2674	1.2869	1.2993	1.3161
Full-time equivalents	604.5	618.1	610.8	625.8	619.3

EXHIBIT 1.5
2009 Selected Industry
Financial Data
(200–299 Beds)

	<i>+Quartile</i>	<i>Median</i>	<i>–Quartile</i>
<i>Profitability Ratios</i>			
Deductible ratio*	0.34	0.26	0.18
Profit (total) margin	5.58%	3.48%	0.53%
Return on assets	5.80%	3.10%	0.40%
Return on equity	15.66%	6.01%	0.62%
<i>Liquidity Ratios</i>			
Current ratio	2.53	1.99	1.48
Days cash on hand	32.35	15.89	6.24
<i>Debt Management Ratios</i>			
Debt ratio	62.90%	48.40%	35.20%
LT debt to equity	127.00%	64.70%	26.90%
Times interest earned	4.29	2.23	1.14
Fixed charge coverage	2.18	1.35	1.02
Cash flow coverage	5.32	3.22	1.76
<i>Asset Management Ratios</i>			
Inventory turnover	98.68	63.95	43.99
Current asset turnover	3.94	3.38	2.88
Fixed asset turnover	2.20	1.76	1.49
Total asset turnover	1.04	0.89	0.75
Average collection period (days)	87.53	75.67	63.33
Average payment period (days)	71.24	56.52	45.84
<i>Other Ratios</i>			
Average age of plant (years)	8.86	7.39	6.14

*Deductions/Gross patient service revenue

LT: long term

Notes: 1. The industry data shown here are for illustrative purposes only and hence should not be used outside this case.

2. The upper quartile is based on the higher numerical value for the ratio and the lower quartile on the lower numerical value, regardless of whether a high value is good or bad. The interpretation is left to the analyst.

EXHIBIT 1.6
2009 Selected Industry
Operating Data
(200–299 Beds)

	<i>+Quartile</i>	<i>Median</i>	<i>–Quartile</i>
<i>Profit Indicators</i>			
Profit per discharge ^a	\$89.04	(\$21.30)	(\$120.08)
Profit per visit ^b	\$ 6.22	\$ 0.66	(\$ 7.01)
<i>Net Price Indicators</i>			
Net price per discharge	\$4,091	\$3,411	\$ 2,815
Net price per visit	\$ 201	\$ 139	\$ 98
Medicare payment percentage	43.47%	36.60%	31.25%
Bad debt/charity percentage ^c	7.89%	4.76%	2.97%
Contractual allowance % ^d	25.27%	20.02%	12.12%
Outpatient revenue %	25.26%	21.03%	17.44%
<i>Volume Indicators</i>			
Occupancy rate	67.12%	58.10%	47.84%
Average daily census ^e	173.23	144.73	114.39
<i>Length of Stay Indicators</i>			
Average length of stay (days)	6.80	6.07	5.41
Adjusted length of stay ^f	6.48	5.36	4.52
<i>Intensity of Service Indicators</i>			
Cost per discharge	\$ 3,937	\$ 3,392	\$ 2,972
Adjusted cost per discharge ^g	\$ 3,417	\$ 2,924	\$ 2,572
Cost per visit ^h	\$202.23	\$141.97	\$111.53
Case mix index	1.2795	1.1756	1.0259
<i>Efficiency Indicators</i>			
FTEs per occupied bed	4.59	4.15	3.77
Outpatient man-hours per visit ⁱ	4.68	5.84	8.66
<i>Unit Cost Indicators</i>			
Salary per FTE ^j	\$24,447	\$22,517	\$20,347
Employee benefits percentage ^k	19.58%	17.04%	15.18%
Liability costs per discharge ^l	\$ 80.94	\$ 42.05	\$ 18.31

^a(Net inpatient revenue – Inpatient cost)/Total discharges

^b(Net outpatient revenue – Outpatient cost)/Total visits

EXHIBIT 1.6
(continued)
Selected Industry
Operating Data

^c(Bad debt + Charity care)/Gross patient revenue
^dContractual allowances/Gross patient revenue
^ePatient days/365
^fAverage length of stay/Case mix index
^gCost per discharge/Case mix index
^hTotal outpatient expenses/Total outpatient visits
ⁱ(Outpatient FTEs x 2,080)/Total visits
^jTotal salaries/FTEs
^kFringe benefit costs/Total salaries
^lInpatient professional liability costs/Total discharges

FTE: full-time equivalent

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2. The upper quartile is based on the higher numerical value for the ratio and the lower quartile on the lower numerical value, regardless of whether a high value is good or bad. The interpretation is left to the analyst.
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