

Chapter 10

Analyzing Financial Statements

LEARNING OBJECTIVES

After studying this chapter, you should be able to do the following:

1. Describe the balanced scorecard and dashboard reporting.
2. Describe the four key elements of dashboard reporting.
3. Explain what the most important measure of financial success is.
4. Explain what a health care firm's primary financial objective should be.
5. Describe the critical drivers of financial performance.
6. Discuss relevant healthcare financial performance measures.
7. Describe the hospital cost-index measure.

REAL-WORLD SCENARIO

Michael Dean has been recently appointed to the Board of Kenyon Medical Center, a 300-bed nonprofit community hospital. Mike is an attorney who specializes in labor law and is the firm's primary litigation expert in this area. He is reviewing the financial information that was sent to him this morning in preparation for his first board meeting this evening. His total financial package includes 28 pages of financial information consisting of current monthly income statements, a balance sheet, and other monthly actual-to-budget comparisons of performance with some selected financial ratios. Tonight's meeting is a critical one because the board's major item for discussion is related to a proposed bond issue to finance a major hospital renovation. Mike recognizes that he has a fiduciary responsibility to protect the assets of the hospital and to ensure its continued financial viability, but he does not know how to determine if the hospital can afford to take on this additional debt. There is so much information and no apparent pattern as to what really is important. He is also concerned about assessing how the proposed financing would impact the hospital's financial performance and thus, its ability to repay both interest and principal on the debt. He recently read a report on "Dashboard Reporting" and wonders if some structure like this would help him and other board members to get a better appreciation for the financial performance of the hospital.

The major purpose of this chapter is to introduce some analytical tools for evaluating the financial condition of health care entities. Think for a moment how confusing and difficult it would be, without a key, to reach any conclusions about financial position from any of the financial statements presented in Chapter 8. Unless your training is in business or finance, the statements may look like a mass of endless numbers with little meaning. In short, there may be too much information in most financial statements to be digested easily by a general-purpose user.

During the last 25 years, there has been an explosion in the adoption and integration of information technology for financial reporting. Financial data are collected, analyzed, and distributed to decision makers in a more accurate and timely manner, and in greater quantity than ever before. However, many people believe that the technology has not had a positive impact upon performance. While we have made important strides in the technology of information collection and distribution, we have failed to realize significant improvements in the decision-making value of that information.

What accounts for the failure to take advantage of information-technology advances? We think the answer is very clear and is one that most executives would readily acknowledge. We have been using the technology to rapidly deliver data (and more of it) to decision-makers, but we have ignored the issue of information relevance. As a result, we have in many cases simply used technology to deliver irrelevant or inappropriate data more quickly. Bad data delivered more quickly is not likely to improve performance in either the short run or the long run.

LEARNING OBJECTIVE 1

Describe the balanced scorecard and dashboard reporting.

The concept of “Balanced Scorecards” developed by Robert Kaplan and David Norton represents an attempt to enhance the value of information and exploit the capability of information technology to deliver true value to decision makers. Balanced scorecards, in their stripped-down version, simply state that reporting should be available on those key attributes affecting perfor-

mance. More data are of little value if they do not provide information to a decision maker that can be used to improve the performance of the firm. “Dashboard” reporting is a natural subset of balanced scorecards and is being increasingly used in almost all sectors of the economy to keep managers focused on critical areas that will affect overall firm performance.

In 1988, one major company won a Vision Award issued by Business Finance for its dashboard reporting system. The company’s present dashboard system is intranet-based and replaced the company’s monthly 200-page binder system that was sent to managers. The mix of 16 financial, operating, and human resource measures is available online in a drill-down format into which managers can dig deeper if they desire. The system is extremely easy to use and focuses on critical performance drivers.

WHAT IS REQUIRED TO DEVELOP AN EFFECTIVE FINANCIAL REPORTING SYSTEM?

LEARNING OBJECTIVE 2

Describe the four key elements of dashboard reporting.

Assuming that many health care providers are interested in developing a dashboard reporting system for key executives and board members, what needs to be done? In general, four critical questions must be answered:

- What is most important to the firm’s success?
- What are the critical drivers that influence performance attainment?
- What are the most relevant measures that reflect critical driver relationships?
- What relevant benchmarking data are available to assess performance?

In the remainder of this chapter, we will answer the four questions above with respect to financial performance. We will then examine a specific hospital example to illustrate the definition and utilization of financial indicators to assess financial performance and to identify critical opportunities for management intervention.

WHAT IS MOST IMPORTANT: SUSTAINABLE GROWTH

Understanding financial performance in any business requires some global or summary measure of financial success. For many health care organization executives, this measure is often the operating margin (operating income divided by revenues). We believe that this measure is wrong and can be misleading in many situations. For example, low operating margins may not always be bad and high operating margins may not always be good.

LEARNING OBJECTIVE 3

Explain what the most important measure of financial success is.

What should be the primary criterion for financial success in health care organizations? We believe that a financially successful organization is capable of generating the resources needed to meet its mission. This creates two immediate questions. First, what are resources? Second, what level of resources is needed to fulfill the mission? Economic resources that are owned or controlled by a business firm are referred to as assets and would include such items as supplies, equipment, buildings, and other factors of production that must be present to produce health services. Human resources are not usually shown as assets because the firm does not own an individual, but human resources also are required in the production of products or services. Resources or assets owned by a health care organization are shown in its balance sheet, which provides a listing of its assets and the pattern of financing used to acquire those assets. The level of resources required by a health care organization depends largely on the range and quantity of health services envisioned in the mission statement. In situations when there is no scientific standard for resource requirements, benchmarking against other health care organizations may be used to partially address the issue of resource need. A hospital or health care firm can find itself in a situation where it may have too little investment in assets to meet the production needs for services, or it may have excessive investment in assets of a certain category.

Resources can be financed with either debt or equity funds, as any balance sheet clearly shows. A financially successful organization must therefore be capable of generating the amount of funds through debt and/or equity that is needed to finance the required level of resources. Figure 10–1 depicts a simple balance sheet illustrating these concepts. In this example, our health care organization needs to increase its investment in assets, or resources, by \$100 million over the next seven years to fulfill its mission. This level of future investment should be a by-product of the firm's strategic plan. A strategic plan should provide some information about projected service levels, which in turn should drive expected investment. Strategic financial planning will be the topic of a later chapter. The rate of annual compounded asset growth for the example in Figure 10–1 is approximately ten percent per year. This rate equals the average rate of asset growth in many voluntary nonprofit hospitals during the last five years. Although this growth rate may seem high, remember that this rate incorporates replacement of assets at higher prices, acquisition of new technology, entry into new product lines requiring new investment, and increases in working capital such as accounts receivable. The health care organization depicted in Figure 10–1 has chosen a financing mix of 50 percent equity and 50 percent debt. This means that seven years later, the target financing mix will be \$100 million of debt and \$100 million of equity to finance the \$200 million investment in assets.

The principle of sustainable growth states that no business entity can generate a growth rate in assets (ten percent in our example) that is greater than its growth rate in equity (also ten percent in our example) for a prolonged period. It may be possible to generate new asset growth of 15 percent for several years, when equity growth is only five percent, by changing the percentages of equity and debt financing. There is no mystery in the principle of sustainable growth; it is not some esoteric finance concept that bears no relationship on reality. Any business will have its asset growth rates limited by its ability to generate new equity growth. To not believe in the validity of this concept would imply that a firm could always increase its percentage of debt financing to any level. There are no exceptions to this theorem. It is not something that represents a nice target; it is a fundamental principle of business from which no one is exempt. Some governmental health care organizations

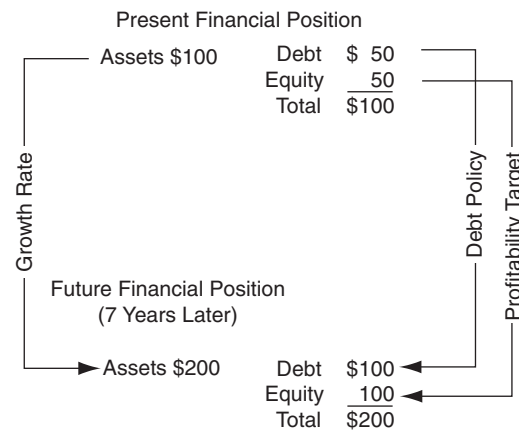


Figure 10-1 Sustainable Growth (figures in millions)

may argue that they always generate growth rates in equity less than their asset growth because they receive capital funds directly from their governmental sponsors. Those transfers represent a transfer of equity and are a part of equity growth.

LEARNING OBJECTIVE 4

Explain what a health care firm's primary financial objective should be.

There is no other financial objective that is more important than equity growth for measuring long-term financial success in any business entity. Health care organizations that expect low rates of equity growth in the future most likely will not be able to provide the level of resources sufficient to meet their mission. If your health care organization anticipates growth rates in equity of only five percent over the next decade, it is almost certain that your asset growth potential will be no greater than five percent. Although the objective is not to add assets or investments for the sake of growth, health care organizations that remain viable must add new investments. Health care organizations with low rates of growth in equity most likely will experience most of their asset growth in working-capital areas, such as accounts receivable and supplies. These firms will invest very little in renovation and replacement of existing plant and equipment, and very little in new capital required for entry into new markets. If they are surrounded by firms that are not also experiencing

low equity growth rates, their market share will decrease as their relative delivery capability deteriorates.

Growth rate in equity (GRIE) can be expressed as follows:

$$\frac{\text{Change in equity}}{\text{Equity}} = \frac{\text{Net income}}{\text{Equity}} \times \frac{\text{Change in equity}}{\text{Net income}}$$

Most voluntary nonprofit health care organizations do not have a source of equity other than net income. This means that no transfers of funds from government or large restricted endowments exist to increase the firm's equity from the level of reported net income. In these situations, the term change in equity/net income equals one; therefore, GRIE can be defined as net income divided by equity, or return on equity (ROE). ROE is therefore the primary financial criterion that should be used to evaluate and target financial performance for voluntary nonprofit health care organizations when transfers of new equity are not likely. ROE is also the primary financial criterion that should be used to evaluate and target financial performance for taxable for-profit firms.

Return on equity can be factored into a number of components that help executives analyze and improve their ROE values. The following equation defines ROE:

$$\text{ROE} = \frac{\text{Operating income} + \text{Non-operating income}}{\text{Revenue}} \times \frac{\text{Revenue}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

LEARNING OBJECTIVE 5

Describe the critical drivers of financial performance.

WHAT ARE THE CRITICAL DRIVERS OF PERFORMANCE?

The previous formula for ROE tells us that there are a variety of ways that an organization can improve its ROE. First, it can improve its operating margins (operating income divided by revenue). Second, it can increase its non-operating gain ratio (non-operating income divided by revenue). Third, it can increase its total asset turnover (revenue divided by assets). Fourth, it can reduce its equity-financing ratio (equity divided by assets). Operating margin improvement is an important strategy for improving ROE, but it is not the only way that ROE can be increased and sustainable growth achieved. Figure 10–2 depicts the critical relationships affecting financial performance in most health care firms.

If we assume that return on equity, or business unit value, is the primary measure of financial performance success, the schematic in Figure 10–2 provides a roadmap of the critical drivers of performance. The schematic shows that the three primary determinants of value are profit, investment, and cost of capital. These three primary determinants of value can be related to a set of macro drivers, and then ultimately to a number of micro value drivers that will enable measurement and modeling for effective dashboard reporting.

It is important that every health care firm interested in developing a set of measures to monitor and evaluate performance start with a model similar to the one defined in Figure 10–2. Without this type of framework, many executives simply try to define a set of measures from those that currently exist or could be created. Defining measures without understanding key relationships can be dangerous. For example, reporting man-hours-per-discharge without adjusting for case-mix intensity can lead to erroneous conclusions and potentially bad decisions. Know your business before you determine how best to capture the essence of its performance.

LEARNING OBJECTIVE 6

Discuss relevant healthcare financial performance measures

MEASUREMENT OF CRITICAL VARIABLES

Understanding the relationships that drive performance permits one to define performance measures that focus management attention on areas that need correction. There is always a dilemma encountered in the definition of the measures that will be used for reporting. First, the absolute number of measures used must be limited. The selected measures should have a high probability of problem/opportunity detection. For example, in our sample hospital's dashboard report, we assess the probability of a supply or drug cost problem by examining costs for four high-profile DRGs. Second, the measures should be naturally related to the key driver map developed earlier (Figure 10–2). In the case of our dashboard report, we identify 13 critical performance driver categories:

1. Market factors
2. Pricing
3. Coding
4. Contract negotiation
5. Overall cost
6. Labor costs
7. Supply costs
8. Departmental costs
9. Service intensity
10. Non-operating income
11. Investment efficiency
12. Plant obsolescence
13. Capital position

Third, the selected measures should be capable of external validation or benchmarking. Measuring current performance with past performance may be helpful in some cases, but ideally comparative industry benchmarks should be available.

Our "Hospital Dashboard" report contains 51 measures that are related to the 13 critical performance driver categories. Each of these measures can be related to external comparative data, as well as compared with individual market area competitors. Benchmarking

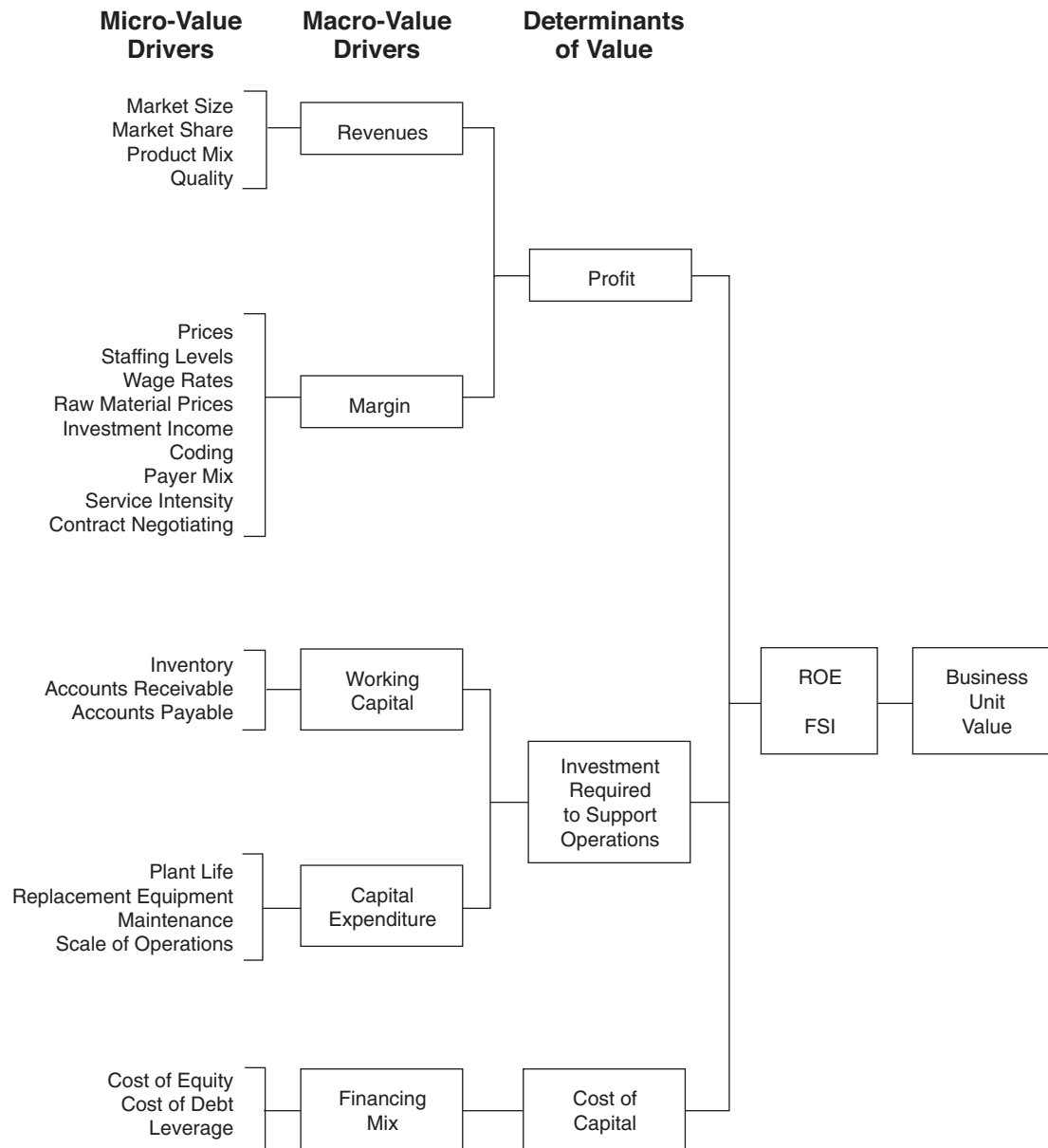


Figure 10-2 Micro-Drivers and Macro-Drivers

data from competitors is extremely valuable. We will be discussing the measures used for each of the 13 performance drivers when we begin our case discussion.

RELEVANT BENCHMARKING DATA

Comparative benchmarking data are crucial ingredients to the success of any dashboard reporting system. Ideally, a business needs some comparative reference points so it can ask itself questions like: How am I

doing with respect to similar firms in my industry? How am I doing relative to my primary competitors?

Identifying measures that capture the nuances of revenue or cost drivers is nice, but they may be of little or no value if external comparative benchmarks can be found. For example, most hospitals would like to measure and compare nursing costs on an acuity-adjusted basis, but uniform benchmarks are not currently available. In this situation, direct nursing cost per patient day may be the best that one can do.

The measures that are used in our case example allow external comparisons and competitor comparisons because the databases employed in the measure definition are publicly available in the following sources:

- Medicare cost reports
- Standard analytical outpatient file
- MedPAR file

CASE EXAMPLE: ALPHA HEALTH CARE SYSTEM

For the remainder of this chapter, we will illustrate the use of financial analysis techniques through a case example based on the fictitious Alpha Health Care System (AHCS). AHCS is a 170-bed acute-care facility with a 20-bed skilled-nursing facility. Balance sheet and income statement data are presented in Tables 10-1 and 10-2. Performance measures for AHCS, its closest competitor, and the U.S. median are presented in Table 10-3.

Overall Performance

Three measures of overall performance are identified in Table 10-3:

1. Return on equity (ROE)
2. Financial strength index (FSI)
3. Total margin (TM)

High values are desirable for all three of these measures. A quick review of the data in Table 10-3 reveals a strong position for AHCS when compared to U.S. medians. There may be some financial and operating issues that need to be addressed if AHCS is to continue as a financially strong health care provider. Before we discuss these measures, we will define them and compute values for 2007.

$$\begin{aligned} \text{ROE} &= \frac{\text{Excess of Revenue over Expenses}}{\text{Net Assets}} \\ &= \frac{15,793}{160,559} = 9.8\% \end{aligned}$$

$$\begin{aligned} \text{TM} &= \frac{\text{Excess of Revenues over Expenses}}{\text{Operating Revenue} + \text{Non-operating Gains}} \\ &= \frac{15,793}{118,292 + 8,017} = 12.5\% \end{aligned}$$

$$\begin{aligned} \text{FSI} &= \left[\frac{\text{Total Margin} - 4.0}{4.0} \right] = \frac{12.5 - 4.0}{4.0} = 2.13 \\ &+ \\ &\left[\frac{\text{Days Cash on Hand} - 50}{50} \right] = \frac{318 - 50}{50} = 5.36 \\ &+ \\ &\left[\frac{50 - \text{Debt Financing \%}}{50} \right] = \frac{50.0 - 24.7}{50.0} = 0.51 \\ &+ \\ &\left[\frac{9.0 - \text{Average Age of Plant}}{9.0} \right] = \frac{9.0 - 7.2}{9.0} = 0.20 \\ &= 2.13 + 5.36 + 0.51 + 0.20 = 8.20 \end{aligned}$$

AHCS's value for ROE is 9.8 percent, which indicates that the firm has a positive bottom line. A review of the data in Table 10-2 shows that AHCS has reported sizable balances of both operating and non-operating income in 2007 and 2006. Also note in Table 10-2 the sizable increases in equity that resulted from unrealized gains on investments (\$2,171,000 in 2007 and \$8,354,000 in 2006). While these gains will not impact net income until the securities are sold, they did raise the level of total equity at AHCS.

Total margin measures the return on revenue from both operating and non-operating sources. AHCS is realizing positive returns in both areas, but non-operating returns in 2007 were lower than those in 2006.

The final overall measure is the financial strength index (FSI). FSI attempts to measure the four areas of financial position that collectively determine a firm's financial strength:

- Profits – measured by total margin
- Liquidity – measured by days' cash-on-hand
- Debt expense – measured by debt financing percentage
- Age of physical facilities – measured by average age of plant

Simply stated, firms that have high profits, lots of cash, little debt, and new plants, have great financial strength. Firms with losses, little cash, lots of debt, and old physical facilities will not be in business long. Each of the four measures is "normalized" around a

Table 10–1 AHCS Balance Sheet, December 31, 2007 and 2006 (Data in Thousands)

	2007	2006
Assets		
<i>Current assets</i>		
Cash and investments	\$ 3,124	\$ 4,394
Patient accounts receivable	21,447	16,094
Inventory	2,122	3,254
Other current assets	<u>480</u>	<u>345</u>
Total current assets	\$ 27,173	\$ 24,087
<i>Assets for which use is limited</i>		
Capital improvements	\$ 87,608	\$ 93,185
Trustee-held funds	20,448	0
Donor restricted	<u>9,056</u>	<u>8,290</u>
Total assets for which use is limited	\$117,112	\$101,475
Property, plant, and equipment		
Property, plant, and equipment	\$113,416	\$ 96,256
Less accumulated depreciation	<u>45,322</u>	<u>46,842</u>
Net property, plant, and equipment	\$ 68,094	\$ 49,414
Other assets	<u>\$792</u>	<u>\$336</u>
Total assets	\$213,171	\$175,312
Liabilities and net assets		
Liabilities		
<i>Current liabilities</i>		
Accounts payable	\$6,093	\$ 5,531
Accrued expenses	5,040	4,587
Current installment of long-term debt	515	725
Due to third-party payers	<u>4,078</u>	<u>4,741</u>
Total current liabilities	\$ 15,726	\$ 15,584
Long-term debt	36,068	15,047
Other long-term liabilities	<u>818</u>	<u>2,566</u>
Total liabilities	\$52,612	\$ 33,197
Net Assets		
Unrestricted	\$151,849	\$134,271
Restricted	<u>8,710</u>	<u>7,844</u>
Total net assets	\$160,559	\$142,115
Total liabilities and net assets	\$213,171	\$175,312

predefined average for the measure. This permits us to add the four measures to create a composite indicator of total financial strength. AHCS has a very strong overall financial strength index (FSI) due primarily to its favorable total margin position and its strong cash position. AHCS's strong cash position is also a factor that impacts total margin. In 2007, more than 50 percent of AHCS's total net income was derived from investment income. Debt levels at AHCS are also below normative values, which further enhances its overall financial strength.

A critical objective for AHCS in coming years will be to maintain its current financial position. We will

now focus our attention on reviewing the 13 critical drivers of performance listed earlier to identify possible areas of opportunity for AHCS.

Market Factors

There are many factors which influence the financial performance of a health care provider, as the schematic in Figure 10–2 shows. Market factors play an important role in the final financial performance of any business. There are six measures of market factors identified in Table 10–3 which are defined below:

Table 10–2 AHCS Statements of Operations, Years Ended December 31, 2007 and 2006 (Data in Thousands)

	2007	2006
Operating revenue		
Gross patient revenue		
Gross inpatient revenue	\$122,908	\$106,108
Gross outpatient revenue	<u>85,543</u>	<u>74,538</u>
Total gross patient revenue	\$208,451	\$189,646
Less contractual allowances	<u>93,639</u>	<u>80,080</u>
Net patient revenue	\$114,812	\$100,566
Other operating revenue	<u>3,480</u>	<u>3,377</u>
Total operating revenue	\$118,292	\$103,943
Operating expenses		
Wages, salaries, and benefits	\$ 58,132	\$ 51,418
Supplies	23,489	21,447
Professional fees	3,855	4,176
Depreciation and amortization	6,307	4,941
Interest	337	786
Provision for bad debts	3,488	2,825
Other	<u>14,916</u>	<u>11,032</u>
Total operating expenses	\$110,515	\$ 96,625
Excess (deficit) of revenues over expenses from operations	<u>7,777</u>	<u>7,318</u>
Non-operating gains—investment income	\$ 8,016	\$ 8,549
Excess (deficit) of revenues over expenses	\$ 15,793	\$ 15,867
Unrealized gains (losses) on investments	2,171	8,354
Net assets released from restrictions	298	282
Transfer to affiliate	<u>(694)</u>	<u>0</u>
Increase (decrease) in unrestricted net assets	\$ 17,578	\$ 24,503

$$\text{Inpatient Revenue \%} = \frac{\text{Gross IP Revenue}}{\text{Gross Patient Revenue}} = \frac{122,908}{208,451} = 60.0\%$$

$$\text{Surgical Cases \%} = \frac{\text{Medicare Surgical Discharges}}{\text{Medicare Total Discharges}} = 28.5\%$$

$$\text{Market Share \%} = \frac{\text{Net patient Revenue}}{\text{Sum of Net Patient Revenue in County}} = 39.2\%$$

$$\text{Medicaid Days \%} = \frac{\text{Medicaid Patient Days}}{\text{Total Patient Days}} = 16.5\%$$

$$\text{Medicare Days \%} = \frac{\text{Medicaid Patient Days}}{\text{Total Patient Days}} = 53.8\%$$

$$\begin{aligned} \text{Revenue Growth (Last Year) \%} &= \frac{\text{Operating Revenue Current Year}}{\text{Operating Revenue Prior Year}} - 1 \\ &= \frac{118,292}{103,943} - 1 = 13.8\% \end{aligned}$$

Inpatient revenue at AHCS is 60.0 percent compared to 57.0 percent at its competitor and 55.6 percent nationwide. In most situations, a higher percentage of inpatient revenue is desirable because profit margins

are usually higher on inpatient product lines. For example, many U.S. hospitals make positive margins on Medicare inpatients, but most hospitals lose money on Medicare outpatients.

AHCS performs more surgeries compared to the U.S. median, but fewer than its competitor does. Usually, surgical inpatient cases are more profitable than medical cases.

Market share is perhaps the most critical measure of performance in the market factor category. High market share often leads to higher realized prices and lower cost per unit. If a health care provider had no competitors and operated as a monopoly, it could conceivably dictate price to all payer groups except Medicare and Medicaid. The market share position of AHCS is lower than that of its competitor. AHCS's competitor enjoys greater market share, which may give it a better contract negotiation position. Since this market is dominated by only two providers, both hospitals should, however, be able to demand and receive

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Table 10-3 AHCS's Critical Financial Measures of Performance, 2007

	AHCS	Competitor	U.S. Median*
Overall measures			
Return on equity %	9.8	22.4	7.3
Financial strength index	8.2	4.1	0.1
Total margin %	12.5	17.4	3
Market factors			
Inpatient revenue %	60.0	57.0	55.6
Surgical cases %	28.5	37.6	20.1
Market share %	39.2	53.3	38.6
Medicaid days %	16.5	5.2	10.2
Medicare days %	53.8	57.7	54.6
Revenue growth last year (%)	13.8	4.0	7.5
Pricing factors			
Medicare charge per discharge (CMI=1.0)	\$12,754	\$11,183	\$12,513
Medicare charge per visit (Relative Wt.=1.0)	\$215	\$176	\$217
Routine room rate	\$501	\$492	\$660
Chest x-ray (71020)	\$163	\$84	\$166
Coding factors			
Two year change in Medicare CMI %	-3.1	6.0	0.4
Medicare CMI	1.3466	1.6995	1.2469
DRG 079/(DRG 079 + DRG 089)	14.0	22.0	21.0
DRG 475/(DRG 475 + DRG 127)	6.0	16.0	12.0
Injectable drugs without injection procedure %	94.9	31.5	34.8
Contract negotiation factors			
Mark-up %	189.0	200.0	220.0
Nongovernment payer %	29.7	37.1	32.4
Deduction %	44.9	41.2	54.5
Overall cost factors			
Hospital cost index	109.60	89.20	102.30
Medicare cost per discharge (CMI=1.0)	\$6,666	\$5,134	\$5,586
Medicare cost per visit (Relative Wt.=1.0)	\$67	\$60	\$71
Labor cost factors			
Net patient revenue per FTE	\$116,418	\$129,756	\$107,397
FTE's per adjusted patient day	5.7	4.8	5.1
Salary & benefits per FTE	\$58,936	\$47,625	\$43,252
Supply and drug cost factors			
DRG 209 supply cost	\$5,721	\$4,106	\$4,493
DRG 116 supply cost	\$6,418	\$4,718	\$5,780
DRG 89 pharmacy cost	\$1,253	\$611	\$725
DRG 79 pharmacy cost	\$2,682	\$878	\$1,179
Non-operating income factors			
Days' cash-on-hand	318	85	36
Investment yield %	11.2	4.3	3.3
Portfolio in equity %	47.8	n/a	n/a
Service intensity factors			
Medicare LOS (CMI=1.0)	4.4	2.6	4.0
Medicare ancillary cost per discharge (CMI=1.0)	\$4,031	\$3,271	\$2,798
Departmental cost factors			
Direct cost per routine day	\$295	\$265	\$273
Direct cost per ICU/CCU day	\$782	\$628	\$649

continues

Table 10–3 continued

	AHCS	Competitor	U.S. Median*
Departmental cost factors			
Direct administrative cost per adjusted patient day	\$313	\$198	\$201
Direct capital cost per adjusted patient day	\$102	\$94	\$100
Overhead cost %	35.1	23.9	33.0
Investment efficiency factors			
Days in accounts receivable	68	57	59
Inventory to net patient revenue %	1.8	2.9	1.9
Revenue to net fixed assets	1.74	1.91	2.49
Plant obsolescence factors			
Average age of plant	7.2	8.3	9.3
Two-year capital expenditure growth %	62.7	4.1	2.9
Capital position factors			
Debt financing %	24.7	13.4	47.3
Long-term debt to equity %	22.5	5.2	34.0
Average cost of equity %	8.7	8.2	9.4
Cash flow to total debt %	42.0	192.5	21.1
Debt service coverage	21.1	n/a	n/a

*U.S. Median dollar values are stated in a wage index of 0.9304; U.S. averages are for 2004.

favorable contract terms because neither hospital has the capacity to service the entire market.

Market share increases also can provide significant improvements in profits because of lower cost per unit. Table 10–3 shows an average cost per Medicare discharge at a case mix equal to 1.0 of \$6,666. For the same discharge, Medicare pays AHCS \$5,623. The payment number is not shown in Table 10–3, but was derived elsewhere, producing an average loss of \$1,043 (\$5,623 – \$6,666). The data suggest that little or no profit might be realized from an increase in Medicare volume, given AHCS's relatively high cost structure. While cost is clearly a problem, which we will address shortly, market share increases for Medicare patients may still be profitable. The critical question to be raised is: What would the variable cost of increased volume be? Usually a figure of 60 percent is assumed, but for this case, let us assume variable cost would be 80 percent, or \$5,333 (.80 × \$6,666). This assumption, if accurate, would mean a marginal profit of \$290 (\$5,623 – \$5,333) per additional Medicare case with a case weight of 1.0. AHCS's primary competitor currently treats 4500 Medicare inpatients compared to 3800 at AHCS. Assuming an average case weight of 1.35 (AHCS's current Medicare case-mix index), a transfer of ten percent of its competitor's Medicare inpatient cases to AHCS would result in a small increase in profit:

Medicare	Marginal		
Cases	CMI	Profit/Case	Marginal Profit
4500	×	1.35	×
			\$290 = \$176,175

Medicare and Medicaid percentages provide an indication of payer segment importance. Usually, Medicaid is perceived as a less desirable payer, while Medicare in many hospitals is a desirable payer, especially for acute inpatient care. AHCS appears to have an unfavorable relationship here. It has much higher Medicaid volume compared to its competitor and the U.S. median, while it has similar percentages of Medicare. AHCS's geographical location has placed it closer to the Medicaid population than is its primary competitor. Losses on Medicaid patients are substantial and when combined with Medicare losses, a need is created for higher payments from the limited private-payer base.

Revenue growth at AHCS is above both its competitor and the U.S. median. This is most likely a result of AHCS's greater growth in Medicaid volume. While revenue growth is desirable, revenue growth in profitable product lines is critical. AHCS has experienced growth in some less profitable lines such as Medicaid, and this has hurt overall profitability.

Conclusions reached from our review of market factors are:

- AHCS must concentrate growth strategies in product lines that are profitable, especially inpatient surgical areas.
- If market share enhancement is not feasible, cost cutting must be pursued or unprofitable product lines must be eliminated.
- Reduced reliance on Medicaid business would be desirable.

Pricing Factors

Pricing can still have a sizable influence on a health care firm's profitability, even considering that many payers have fixed-fee reimbursement schedules. Of concern to many is the price elasticity of health care services. In simple terms, will volume drop if I raise prices? This is a difficult question to answer, but in many cases price elasticity is believed to be negligible for many health care services. If a health care firm's prices are lower than those of its competitors', the issue of price elasticity becomes of less importance. The first objective is, therefore, to determine if your prices are above or below those of your competitors'. The four pricing measures are all developed from public data sets and are presented in Table 10-3. The data show that AHCS has prices well above those of its competitor's, but similar to the U.S. median.

Average charge per Medicare discharge (CMI = 1.0) defines the average price for a Medicare discharge with a case-mix weight of 1.0. Table 10-4 provides a simple example to illustrate how this measure is developed. Adjusting charges or cost to a case weight of 1.0 permits meaningful comparisons across firms. Table 10-3 also indicates that this measure for the U.S. median is stated in the hospital's wage index of .9304. This removes potential cost-of-living issues that might impair comparability. Charges for a specific discharge or an outpatient encounter are the product of two factors:

- Intensity of service
- Charges for specific procedures

An inpatient discharge has a large number of services provided, such as routine nursing, laboratory procedures, surgical procedures, drugs, and many others. Total charges may be high not because of high procedure prices, but because of high utilization of services,

for example, a long length of stay. A high total charge can also result from high procedure-level prices, even in situations of low service intensity. AHCS's inpatient charge per case is similar to the U.S. median on a case- and wage-index-adjusted basis, but it is higher than its competitor's. Most likely, AHCS's higher charges can be attributed to its higher cost structure and its high Medicaid volume. High percentages of Medicaid are often associated with large indigent populations, which often increase prices to the private-payer base.

Average charge per Medicare visit adjusted for relative weight is a concept similar to the average charge per Medicare discharge case-mix-adjusted measure just described. It uses the weights assigned by Medicare to pay for outpatient procedures to case-mix adjust individual claims. We will discuss this measure further when we review cost measures. Data for the outpatient charge measure are similar to the inpatient measure just discussed. AHCS has a charge structure similar to that of the U.S. median, but well above its local competitor.

The last two measures, routine room rate and chest x-ray (CPT code 71020) represent two high-volume specific procedures. AHCS again has high prices in both areas relative to its competitor.

Even though prices at AHCS are high compared to those of its competitor, a rate increase might be initiated with little or no damage to its competitive position. A rate increase of eight percent would most likely keep AHCS in the same relative market position, but how much profit would result? The answer depends upon the percentage of patients who pay for services on a charge or discounted charge basis. Table 10-5 provides some results for alternative charge-payer percentages. The possible improvement in profit from a price increase is large and could maintain AHCS's profitability. Most hospitals have charge-payer percentages that are between 10 and 20 percent, so the range is realistic. In fact, many managed care contracts provide for fixed case or per-diem inpatient payments for inpatient care, but percentage-of-charges payments for outpatient care.

Conclusions reached from our pricing review are:

- AHCS should consider a rate increase or approximately eight percent even though its current prices are high.
- An increase of this size could generate close to \$3 million in profit.

Table 10–4 Illustration of Case-Mix Weighting

DRG	Case Weight	Number of Cases	Aggregate Case Weight	Total Charges
1	.80	10	8.00	\$ 64,000
2	1.20	10	12.00	96,000
3	1.60	10	16.00	128,000
		30	36.00	\$288,000

$$\text{Average charge per case} = \frac{\$288,000}{30} = \$9,600$$

$$\text{Average charge per case (CMI} = 1.0) = \frac{\$9,600}{1.2} = \$8,000$$

$$\text{Average case weight} = \frac{36}{30} = 1.2$$

Coding Factors

Coding can have a significant effect on the actual payment received in almost every health care sector—from physician services to hospitals—and for almost every type of payer—from self-pay to Medicare. Coding can also be a double-edged sword. Code too aggressively or fraudulently, and you may be prosecuted. Under-code patient services, and you will lose sizable legitimate payments.

In our hospital dashboard of Table 10–3, we identify five primary coding measures that assess Medicare inpatient coding. Data for these measures are again provided from publicly available sources.

Medicare case-mix index (CMI) indicates the average complexity of Medicare inpatients seen. Table 10–4 provides a simple example to illustrate the computation of a case-mix index. In that example, the average case-mix index for the 30 patients was 1.2. AHCS

has a Medicare CMI of 1.3466, which is below its competitor's value (1.6995) but above the U.S. median (1.2469). Of special interest is the two-year decline in AHCS's Medicare case mix. This decline compares to a 6.0 percent increase at its primary competitor and 0.4 percent increase nationally.

A more specific way to assess coding reasonableness is to review so-called DRG dyads. These are pairs of DRGs in which possible missed information in the medical records could affect DRG assignment. We have provided two DRG dyad measures in Table 10–3. The actual DRG measures and their relative weights are presented in Table 10–6. Actual values from Table 10–3 for both DRG dyads suggest that AHCS may be incorrectly coding its inpatient DRGs. The data show that AHCS had reported lower frequencies of the higher-weighted DRG than its primary competitor; they were also lower than the U.S. median. This could be further corroboration of coding issues at AHCS. Of special interest is the DRG 475 and DRG 127 dyad. In many cases, a patient may be admitted with a heart attack, but also be experiencing respiratory problems and be put on a ventilator. The case weight values in Table 10–6 show a significant difference in payment for DRG 127 when compared to DRG 475. Table 10–7 shows the potential difference in payment if AHCS had a coding pattern similar to that of the U.S. AHCS may be losing \$139,032 (\$1,190,493 – \$1,051,461) on this one DRG dyad.

The last measure of coding is the percentage of Medicare outpatient claims with an injectable drug present, but with no drug-administration code (injection

Table 10–5 Profit Resulting from Pricing Increase

	Percentage of Charge Payers	
	10%	20%
Present gross charges	\$208,451,000	208,451,000
× Charge payer %	10	20
Charge-driven revenue	\$20,845,100	\$41,690,200
× Rate increase %	8	8
Profit Change	\$ 1,667,608	\$ 3,335,216

Table 10–6 DRG Dyads

<i>DRG</i>	<i>Definition</i>	<i>2006 Relative Weight</i>
079	Respiratory infections with cc	1.6238
089	Simple pneumonia with cc	1.0320
096	Bronchitis and asthma with cc	3.6091
097	Bronchitis and asthma without cc	1.0345
475	Respiratory system diagnosis with ventilator support	3.6091
127	Heart failure and shock	1.0345

procedure) present. At AHCS, this situation was present 94.9 percent of the times. Assuming Medicare pays \$90 per injection procedure, AHCS lost more than \$40,000 in this one area alone from Medicare-only patients.

The conclusion reached from our coding review is:

- AHCS appears to have coding problems. A review of current coding and billing procedures should be undertaken.

Contract Negotiation Factors

A popular saying in many management circles is, “You don’t get what you deserve, but rather what you negotiate.” The same appears to be true in the large number of managed care contracts that health care providers negotiate with health plans. The contract terms are especially important to most health care providers because favorable terms often spell the difference between financial success or failure. For most health care providers, there is no opportunity to negotiate terms for Medicare and Medicaid payment. The terms are fixed and are made on a take-it-or-leave-it basis. The magnitude of patient volume in these two payer categories makes it a must for most providers.

The real opportunity comes in negotiation of non-government-payer terms.

We have provided three measures for contract negotiation assessment. Collectively, these measures help assess any possible weakness in current contract terms. The first measure is nongovernment-payers’ percentage and represents the percentage of revenues not derived from Medicare or Medicaid patients. A high number indicates greater relative importance of effective contract negotiation. AHCS has a relatively low percentage of nongovernment payers (29.7 percent) relative to the U.S. median (32.4 percent) and much less than its competitor (37.1 percent).

The second measure reviewed is mark-up:

$$\text{Markup} = \frac{\text{Gross Patient Revenue}}{\text{Total Expenses}} = \frac{\$208,451}{110,515} = 1.89$$

AHCS has relatively low mark-up ratios relative to both its competitor and the U.S. median. Because prices at AHCS are above those of its competitor, the lower mark-up ratio signals higher costs at AHCS relative to its competitor. Given this information, we would expect the deduction percent measure to be high:

$$\text{Deduction \%} = \frac{\text{Contractual Allowances}}{\text{Gross Patient Revenue}} = \frac{\$93,639}{\$208,451} = 44.9$$

The three contract negotiation measures suggest that AHCS has contracts more favorable than does the average U.S. hospital, but not as favorable as its primary competitor. In fact, most of AHCS’s contracts are discount from billed charges, which explains how AHCS has realized operating profitability with a high mix of Medicaid patients and high costs. Charges at AHCS are currently 15 to 20 percent higher than those of its primary competitor, but deduction percentages at both hospitals are similar (44.9 and 41.2, respectively). We believe current contracts for both AHCS and its competitor must have similar rates of payment. AHCS’s

Table 10–7 Possible Payment Change Due to Coding

<i>DRG</i>	<i>Cases</i>	<i>Expected Cases</i>	<i>Case Payment</i>	<i>Present Payment</i>	<i>Expected Payment</i>
127	138	129	\$6,207	\$856,566	\$800,703
475	9	18	21,655	194,895	389,790
				\$1,051,461	\$1,190,493

competitor is realizing greater profit, primarily through its lower cost structure.

Conclusions reached from our review of contract negotiation factors are:

- AHCS and its competitor are most likely receiving similar payment from managed care plans.
- Renegotiation of these contracts at similar rates could be a problem, given AHCS's competitor's greater market share and lower prices.

LEARNING OBJECTIVE 7

Describe the hospital cost-index measure.

COST POSITION – A NEW APPROACH

We indicated previously that we believe AHCS's primary area of opportunity is cost reduction. To better assess relative cost positions, we will introduce a new construct for reviewing total hospital cost. This construct is further described in a July 2002 article published in *Healthcare Financial Management*, "The Hospital Cost Index: A New Way to Assess Hospital Efficiency." Figure 10–3 provides a schematic of the methodology. Most hospitals currently use an adjusted-discharge or adjusted-patient-day output measure, which we believe to be flawed.

Problems with Adjusted-Discharge Measures of Cost

Most U.S. hospitals can divide their patient operations into inpatient and outpatient areas. Gross patient revenue is often subdivided along these lines. In the last 20 years, outpatient activity has gone from under 20 percent in most hospitals to close to 40 percent in 2004. This dramatic increase in outpatient revenue has caused more individuals to question the validity of incorporating outpatient activity into a consolidated measure of cost by using adjusted discharges or adjusted patient days.

The critical measurement concept in an adjusted discharge or day measure is the weighting for outpatient revenue. The usual methodology for defining adjusted discharges or days is expressed as a formula:

Adjusted Discharges (days) = Inpatient Discharges (days)

$$\times \left[1 + \frac{\text{Gross Outpatient Revenue}}{\text{Gross Inpatient Revenue}} \right]$$

Procedure Pricing

The computation of adjusted discharges is heavily influenced by specific procedure prices in the hospital's Charge Description Master (CDM). Some hospitals may price procedures with high outpatient utilization at higher levels to take advantage of the greater presence of "percentage of billed charges" payment arrangements.

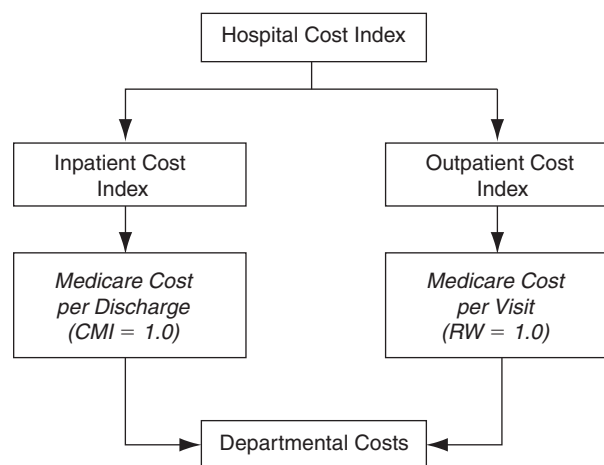


Figure 10–3 Analysis of Overall Cost

Other hospitals may keep high outpatient procedures at lower levels because of a large self-pay presence, implying greater price elasticity. Some data suggest that the majority of hospitals overstate outpatient costs because of higher procedure prices. If this is so, hospitals with heavier percentages of outpatient activity or higher outpatient prices would have larger values for adjusted discharges and, therefore, lower costs per adjusted discharge. This may partially explain why smaller hospitals, which often have greater percentages of outpatient revenue, have lower costs per adjusted discharge.

Output Differences

Another major factor that affects the comparability of cost measures using an adjusted-discharge basis is output differences. Even if there were only inpatient discharges and no outpatient activity, discharges would not be an ideal measure to make comparisons of cost across hospitals because of case-mix differences. Many cost-per-adjusted-discharge measures are further adjusted by dividing by the case-mix index of the hospital for the time period. There are two alternative case-mix indexes that are often used:

- All-payer case-mix index
- Medicare case-mix index

Obviously, the all-payer case-mix index will do a better job of reflecting output differences than will a Medicare-only case-mix index. However, there is one major issue with the utilization of all-payer case-mix-index adjustments. You may be able to adjust your cost for case-mix effects, but will the external comparative cost measures be adjusted in similar fashion? Competitor data extracted from public files, such as Medicare Cost Reports, will not have all-payer case-mix-index values. For controlled subscriber-based benchmarking services, the all-payer case-mix-index adjustments may be accurate, but the comparisons will be limited to other subscribing hospitals and will exclude specific competitor comparisons.

For the above reasons, Medicare case-mix-index adjustments are often utilized in a number of comparative reports. In many cases, the Medicare case-mix index can remove cost variance and better isolate possible problems. The Medicare case-mix-index adjustment will be an issue, however, when the non-Medicare patient population differs dramatically from the Medicare patient population. For example, a hospital that specialized in orthopedics and obstetrics would present problems.

Using the Medicare case-mix index would grossly overstate case-mix complexity because all of the obstetric cases, which would be lower-case weighted, however not applicable to Medicare claims.

Geographical Cost-of-Living Differences

The final area affecting the comparability of cost-per-adjusted-discharge measures is geographic cost-of-living differences. Hospitals in Oakland, California, have higher operating costs than do hospitals in rural North Dakota. The usual method of adjustment is to divide the unadjusted cost measure by the local area cost-of-living index. This division would restate costs into a cost-of-living index equal to 1.0. The wage index used by Medicare is the most often-used index and may be applied to total cost or some percentage of total cost. The rationale for a percentage is that some portion of hospital costs, e.g., supplies, may not be affected by cost-of-living differences. Medicare assumes that the wage index affects 71 percent of total cost. The remaining 29 percent is presumed not to be affected by wage variation.

Cost-of-living differences are important and the adjustments can be easily handled. Of the three problems affecting cost comparability (procedure pricing, output differences, and geographical cost-of-living differences), cost-of-living differences can be resolved. The problems with procedure pricing and output differences are still present in a CPAD measure, even after case-mix indexes have been applied.

HOSPITAL COST INDEX (HCI)

We believe that a better measure of facility-wide hospital costliness can be constructed by weighting two measures:

1. Medicare cost per discharge, case-mix, and wage-index adjusted (MCPD)
2. Medicare cost per outpatient visit, relative value unit and wage-index adjusted (MCPV)

The HCI is then constructed as follows:

$$\begin{aligned} \text{HCI} = & \% \text{ Inpatient Revenue} \times \frac{\text{MCPD}}{\text{U.S. Median}} \\ & + \% \text{ Outpatient Revenue} \times \frac{\text{MCPV}}{\text{U.S. Median}} \end{aligned}$$

Medicare Cost per Discharge (MCPD)

Medicare cost per discharge is a good reflection of inpatient cost. Data for computing this measure can be derived from the following public-use files: Medpar and Medicare Cost Reports. Each Medicare inpatient claim is costed by using the relevant departmental ratio of cost-to-charge (DRCC) values derived from the Medicare Cost Report and applying them to charges from the inpatient claim. The DRCC values are mapped to specific revenue codes in the claims file. Finally, a Medicare-assigned wage index is used to restate costs to an index of 1.0. This process results in a unique publicly available number for most hospitals in the U.S.

The MCPD is not a perfect measure of relative inpatient costs, but we believe it is better than any other publicly available measure of cost or inpatient cost at the facility level for several reasons. The output unit is more comparable than any other. There is no application of outpatient-equivalent discharges to distort output similarity. The case-mix index used to adjust it is specific to those patients and is not extended to non-Medicare patients. The cost measures are adjusted using department-specific cost-to-charge ratios, not facility-wide cost-to-charge ratios. Finally, the costs are adjusted for cost-of-living differences.

The major problem with MCPD is its comprehensiveness. In short, the measure may or may not be reflective of costs in other non-Medicare areas. We believe that this is not a major issue for the following reasons. First, Medicare represents the largest payer for most hospitals: approximately 53 percent of all inpatient days and 44 percent of discharges. Second, with a fixed payment per DRG, there is an incentive to keep costs low. If costs are high in the Medicare area, they will most likely be high in other non-Medicare areas.

Medicare Cost per Outpatient Visit (MCPV)

We use MCPV to assess costliness on the outpatient side of hospital operations. We can construct this measure from public data—Medicare Outpatient Claims and Medicare Cost Reports—which make its availability a reality for most U.S. hospitals. To derive the measure, we divide the cost per claim defined through the DRCC extensions by the relative value units of the claim. We estimate RVUs based on the following taxonomy:

<i>Line-Item Type</i>	<i>RVU Assignment</i>
APC	APC weight
Fee schedule	Fee schedule/nat'l price per APC = 1.0
Pass-through drug and biologicals	Avg. wholesale price/nat'l price per APC = 1.0
Pass-through device	Estimate payment/nat'l price per APC = 1.0

We believe the introduction of the Outpatient Prospective Payment System (OPPS) has provided an opportunity to adjust outpatient costs for relative-value unit differences in a manner similar to case-mix-index adjustment on the inpatient side. We do not know of any other measure of facility-wide outpatient cost that incorporates relative-value unit adjustment to this degree. Medical groups have used resource-based relative value scales (RBRVS) measure, but these were not applicable to hospital outpatient operations.

The MCPV is not a perfect measure of outpatient costliness. Like the MCPD, the MCPV does not necessarily reflect cost for non-Medicare patients. Medicare patients are, however, a significant percentage of total outpatient business (21 percent in 1999). Medicare also pays on a fixed-fee basis now, so that is a strong incentive to keep costs low. If costs are high for Medicare outpatients, it seems reasonable to conclude that they would be high for other categories.

Merging the MCPD and the MCPV

The final step in the development of the HCI is to combine the MCPD and MCPV. To combine these two measures, we must weight them by the percentage of business activity. The MCPD is, therefore, multiplied by the percentage of inpatient revenue, and the MCPV is multiplied by the percentage of outpatient revenue. The sum of inpatient revenue and outpatient revenue percentages should equal 1.0. Data for these values will be taken from Medicare Cost Reports.

The final step is to “normalize” the MCPD and MCPV around some central value. We use the current U.S. median values for both measures.

OVERALL COST FACTORS

Using the three measures just described (HCI, MCPD, and MCPV), we can see from Table 10–3 that AHCS is a high-cost hospital with respect to both its primary

competitor and the U.S. median. AHCS's HCI is currently at 109.6, which is 7.1 percent above the U.S. median (102.3) and 22.9 percent above its primary competitor. The data also show us that AHCS has a greater opportunity for cost reduction in the inpatient arena where its cost per discharge on a case-mix basis is significantly above both that of its competitor and the U.S. median.

Labor Cost Factors

Health care providers, in general, and hospitals in particular are labor-intensive operations. More than 50 percent of their costs are connected to staffing. To analyze labor costs, we have selected two measures of productivity and one measure of compensation.

$$\begin{aligned} & \text{Net Patient Revenue per FTE} \\ = & \frac{\text{Net Patient Revenue}}{\text{FTEs}} = \frac{114,812,000}{986.2} = \$116,418 \end{aligned}$$

FTEs per Adjusted Patient Day

$$\begin{aligned} & = \frac{\text{FTE} \times 365}{\text{Adjusted Patient Days}} \\ & = 986.2 \times \frac{365}{63,037} = 5.7 \end{aligned}$$

Salary and Benefits per FTE

$$= \frac{\text{Salaries \& Benefits}}{\text{FTEs}} = \frac{58,123,000}{986.2} = \$58,936$$

Collectively, the labor cost measures suggest a problem. Salary and fringe benefit costs are very high compared to the U.S. median and also high relative to those of its competitor. Fringe benefit costs do appear excessive. Much of this cost is directly related to a very expensive "defined benefit" retirement plan, as well as a very liberal educational benefit program.

Labor productivity at AHCS is also worse on both measures when compared to its competitor. Part of the issue at AHCS may be related to a very generous sick leave and vacation policy. Further in-depth analysis needs to be directed to department-specific benchmarks.

Conclusions reached from our review of labor cost factors are:

- Compensation costs appear out of line with the U.S. median and costs of ACHS's competitor. Fringe benefit costs appear out of line when com-

pared to any reasonable benchmark. AHCS should explore the termination of its present retirement program and explore one that is of a comparable cost relative to other employers' programs, especially the program of its competitor.

- Labor productivity appears to be worse than competitor values. Comparative analysis at departmental levels should be initiated to determine where specific problems exist.

Supply and Drug Costs

Supply and drug costs can be significant factors for a large number of medical and surgical procedures. The magnitude of total supply and drug costs is complicated because of the underlying factors that influence cost. These particular costs are a product of the quantity used and the price paid. Lower costs can be realized by either reducing the intensity of usage or reducing the price paid. Lower prices can be realized through better purchasing contracts or using lower priced supplies or drugs. The issue is often complicated by physician preferences. Health care executives can attempt to influence physician behavior in supply or drug selection, but ultimately, the physician will determine which drug or supply item will be used and in what quantity.

We provide four measures of inpatient supply and drug costs. Two of these measures define supply costs for DRGs whose supply costs are usually sizable:

- DRG 209 – Major joint and limb attachment procedures—lower extremity
- DRG 116 – Other permanent cardiac pacemaker, implant, or Automatic Implantable Cardioverter Defibrillators (AICD).

Both measures indicate that AHCS has costs much larger than the U.S. median and also much larger than competitor values. While the variance exists, the explanation is not clear without further review. Possible explanations could be:

- Poorly-negotiated purchase contracts, which result in higher prices
- Usage of more expensive supply items by physicians

Further review suggests that physician preference for higher-priced supply items is the primary cause. This results in a medical decision-making dilemma. Should physicians use less costly supply items to improve the hospital's bottom line, and would these lower-cost supply items adversely affect patient care?

Two DRG drug cost measures are also reviewed:

- DRG 089 – Simple pneumonia and pleurisy
- DRG 079 – Respiratory infections and inflammations

AHCS also appears to have higher drug costs than do the other two players in this analysis. Similar issues for supply costs also appear present with respect to drug usage.

Conclusions reached from our review of drug and supply costs are:

- Supply and drug costs appear to be very high and result primarily from physician preferences.
- Review of supply and drug costs with selected physicians should be undertaken with the desired outcome of supply and drug standardization.

Non-Operating Income

Many nonprofit health care providers, especially hospitals, derive a large percentage of their total net income from non-operating sources. The usual source of non-operating income for most hospitals is investment income. Data from Table 10–2 show this to be especially true for AHCS.

We have defined three measures to assess performance in the non-operating income area:

$$\begin{aligned} \text{Days Cash on Hand} &= \frac{\text{Unrestricted Cash and Investments}}{(\text{Total Expenses} - \text{Depreciation}) / 365} \\ &= \frac{3,124 + 87,608}{(110,515 - 6,307) / 365} = 318 \end{aligned}$$

$$\begin{aligned} \text{Investment Yield} &= \frac{\text{Investment Income} + \text{Unrealized Gains (Losses)}}{\text{Unrestricted Cash and Investments}} \\ &= \frac{\$8016 + 2,171}{3,124 + 87,608} = 11.2\% \end{aligned}$$

$$\begin{aligned} \text{Portfolio in Equity} &= \frac{\text{Equity Investment}}{\text{Unrestricted Cash and Investments}} \\ &= \frac{43,412}{3,124 + 87,608} = 47.8\% \end{aligned}$$

AHCS has a very sizable investment in securities, as seen from its days' cash-on-hand value of 318 days. Only investments that are not restricted by donors or third parties are included. This explains why trustee-held funds (\$20,448) and donor-restricted funds (\$9,056) are excluded.

In addition, AHCS has a very sizable percentage of its investment in equities: 47.8 percent. This high percentage of equity investment can increase yields, but

risk is also increased. Investment income includes both interest and dividend income, as well as realized gains or losses on securities sold during the period.

Conclusions for AHCS with respect to its investment portfolio are:

- Review current investment strategy and perhaps place equity investment in funds that replicate broad market segments, such as the Standard and Poor's 500 or the Wilshire 5000.
- Determine if AHCS is willing to assume the relatively high risk of equity investments or whether a reduced reliance on equity funds is more consistent with projected needs for these funds.

Service Intensity

Service intensity is a critical driver of health care cost. Cost per encounter of service can be defined as:

$$\frac{\text{Services}}{\text{Encounters}} \times \frac{\text{Inputs}}{\text{Services}} \times \text{Prices of Resources}$$

Each of these three factors will drive total health care costs. The first term (services/encounters) is referred to as service intensity. The two major drivers of service intensity for inpatient care are length of stay (LOS) and ancillary service usage. We have, therefore, included two measures to help assess service intensity:

- Medicare length of stay, case-mix-index adjusted
- Medicare ancillary cost per discharge, case-mix-index adjusted

Both of these measures are taken from Medicare data and are case-mix adjusted to 1.0. The use of these measures assures that there will be comparability across hospitals because the measures are "apple-to-apple" comparisons.

AHCS has a high LOS on a case-mix-adjusted basis when compared to the U.S. median. Its value is also above that of its primary competitor's. Its high length of stay is a reason its cost per discharge is so high. Please note that AHCS's Medicare LOS unadjusted is actually 5.92, but its Medicare case-mix index was 1.3466, which deflates the LOS to 4.4 on a case mix-adjusted basis. Significant opportunity exists for cost reduction from further LOS declines.

Ancillary costs are also above the U.S. median and warrant review. Prior discussion has already disclosed high prices paid for supply and drug items. This is most likely the cause for the variance. It should also be

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noted that a higher length of stay may not affect ancillary costs. Most of these services are not necessarily related to LOS.

Table 10–8 documents the potential savings for one DRG and illustrates the potential from LOS reduction and reduced drug usage.

Conclusions reached from our service intensity review are:

- AHCS has significant opportunity for major savings in this area.
- Low levels of efficiency, especially LOS management, exist.

Departmental Cost Factors

We have included five measures of departmental cost:

- *Nursing Cost Measures*
 1. Direct cost per routine day
 2. Direct cost per ICU/CCU day
- *Overhead Measures / Adjusted Patient Day*
 3. Administrative cost per adjusted patient day

4. Capital-related cost per adjusted patient day
5. Overhead cost percentage

Direct costs of nursing for both routine care and ICU/CCU care are high relative to the U.S. median and the costs of ACHS's competitor. These cost measures include only the direct cost of the department and do not include overhead allocations. The cost data are extracted from filed Medicare Cost Reports. The high nursing cost values are somewhat surprising, given the high LOS at AHCS. Usually, nursing intensity is highest in the early days of care; and it would be reasonable to expect higher costs per day of care in low-LOS situations.

The three overhead measures of cost also suggest some inefficiency. AHCS appears to have higher administrative and capital costs than the U.S. median reflects and should be reviewed.

Conclusions reached from the review of departmental cost factors are:

- AHCS has high direct nursing costs per day. This is a result of both a higher RN mix and higher salaries.

Table 10–8 DRG Savings Opportunities

<i>DRG 478 (Other Vascular Proc w cc)</i>	<i>AHCS</i>	<i>Competitor</i>	<i>U.S. Median</i>
Discharges	38	46	43
Medicare LOS	8.89	5.59	7.01
Avg Routine LOS	7.13	4.59	4.93
Avg ICU/CCU LOS	1.76	1.00	2.08
Routine care costs	3,996	3,515	2,813
ICU/CCU costs	<u>2,035</u>	<u>1,408</u>	<u>2,291</u>
Subtotal	6,031	4,923	5,104
Medical/surgical supplies	2,009	2,035	2,161
Laboratory	1,288	889	636
Operating room	6,227	4,674	2,555
Radiology	1,011	1,494	797
MRI	123	41	37
Pharmacy	2,411	1,202	1,162
Emergency room	102	53	86
Cardiology	248	483	244
Blood	145	313	183
Physical/occupational therapy	564	103	139
Inhalation therapy	211	91	134
Other	<u>943</u>	<u>766</u>	<u>522</u>
Subtotal	<u>15,282</u>	<u>12,144</u>	<u>8,656</u>
Grand Total	<u>21,313</u>	<u>17,067</u>	<u>13,760</u>

- Overhead costs at AHCS are high, especially in the administration area. Reductions in administrative costs should be pursued.

Investment Efficiency Factors

As discussed earlier in this chapter, it is not the amount of profit realized that is of prime concern, but rather the amount of profit in relation to investment. For most health care providers, the three critical areas of control are plant, property, and equipment; accounts receivable; and inventory. To assess performance in these three areas, we have defined three measures that assess the productivity of investment.

$$\begin{aligned} \text{Days in Accounts Receivable} &= \frac{\text{Net Accounts Receivable}}{(\text{Net Patient Revenue} / 365)} \\ &= \frac{21,447}{114,812 / 365} = 68.2 \end{aligned}$$

$$\begin{aligned} \text{Inventory to Net Patient Revenue} &= \frac{\text{Inventory}}{\text{Net Patient Revenue}} \\ &= \frac{2,122}{114,812} = 1.8\% \end{aligned}$$

$$\text{Revenue to Net Fixed Assets} = \frac{\text{Operating Revenue}}{\text{Net Fixed Assets}} = \frac{118,292}{68,094} = 1.74$$

AHCS has poor investment productivity with respect to both accounts receivable and fixed assets. Reductions in both categories could enhance the financial performance of the firm significantly.

High values for receivables can be the result of many factors, but in general result from three primary causes:

- Payment delays by payers, especially commercial health plans
- Large balances of old accounts whose collection is suspect
- Billing delays that prevent prompt invoicing of provided care

A review of AHCS's billing and collection systems indicates that poor coding and documentation delays are preventing the hospital from sending out bills promptly. The hospital also has large balances of old receivables from self-pay patients that need more aggressive collection efforts. Table 10–9 provides an estimate of potential flow savings realizable if current balances in receivables could be reduced. Almost \$230,000 per year in additional investment income could be realized if AHCS could bring its accounts receivable down to the U.S. median of 59 days.

Table 10–9 Cash Flow Impact of Accounts Receivable Reduction

Present AR balance	\$21,447,000
Present days in AR	68.2
U.S. median days in AR	59.0
Potential day savings	9.2
Average net patient revenue per day*	\$314,533
Potential dollar reduction in AR	\$2,893,892

Annual investment income on reduction (8% yield) \$231,511

Calculation: *\$114,812,000/365 = \$314,553

Alpha Health Care System also appears to have excess investment in net fixed assets. It currently generates 1.74 of operating revenue per dollar of investment in net fixed assets compared to a U.S. median of 2.49 and a competitor value of 1.91. Determining the desired level of investment in fixed assets is not an easy decision and is heavily influenced by a large number of stakeholders in the firm, including doctors, board members, employees, and the community. Long-term investment levels in property and equipment are often a part of the firm's strategic plan and reflect perceived community needs, as well as financial and marketing objectives. Oftentimes many nonprofit health care executives forget that capital has a real cost and excessive fixed asset investment can impair the firm's long-term financial viability.

What is the potential cost of AHCS's excessive investment in fixed assets? There are several ways that this could be measured. First, we could isolate the direct costs of the excessive investment in terms of depreciation and interest expenses. Second, we could impute some opportunity cost of the excess investment, using the expected yield on alternative investments. Third, we could multiply the firm's estimated cost of capital times the excess investment.

To determine the amount of excess investment in fixed assets, we need a target revenue to fixed assets standard. For this purpose, let's use the U.S. median of 2.49. The desired level of investment in fixed assets would be:

$$\frac{\text{Operating Revenue}}{\text{Target Revenue to Fixed Assets}} = \frac{\$114,812}{2.49} = \$46,109$$

AHCS has \$21,985,000 in excess investment (\$68,094,000 – \$46,109,000). This surplus invest-

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ment represents 32.2 percent of AHCS's present investment in net fixed assets. Assuming that 32.2 percent of the firm's depreciation and interest is not necessary produces one estimate of annual cost:

$$.322 \times (\$6,307,000 + \$337,000) = \$2,139,368$$

Alternatively, we could assume a possible yield on risk-free investment of 6.0 percent as our opportunity cost. This would produce an annual savings of \$1,319,100 ($.06 \times \$21,985,000$).

No matter what method of cost savings is used, AHCS has a heavy cost associated with its excess investment in fixed assets. Much of this surplus is a direct result of intense physician pressure to finance new investment in clinic facilities to support the integrated network of services provided by AHCS.

Conclusions reached from our investment efficiency review are:

- Receivables are very high at AHCS, primarily due to poor coding and documentation. Reductions to U.S. medians could produce \$231,511 in annual cash flow.
- Fixed asset investment at AHCS is \$22 million above the U.S. median. This surplus investment could cost AHCS somewhere between \$1.3 million and \$2.1 million annually. Tighter capital-expenditure review policies need to be implemented to prevent this problem from getting worse.

Plant Obsolescence Factors

While excessive investment in fixed assets can impair the realization of reasonable return on investment, investment in old facilities and outdated technology can be fatal. If a health care firm, especially a hospital, has old and outdated facilities, it will likely affect the quality of care rendered to its patients. It may also lead medical staff to practice at facilities where they believe the welfare of their patients may be better served. We have defined two measures to assess the issue of plant obsolescence:

$$\text{Average Age of Plant} = \frac{\text{Accumulated Depreciation}}{\text{Depreciation Expense}} = \frac{45,322}{6,307} = 7.2$$

$$\text{2-Year Capital Expenditure Growth Rate} = \frac{\text{Capital Expenditures in Last 2 Years}}{\text{Gross Fixed Assets Two Years Ago}} = \frac{48,124}{76,714} = 62.7\%$$

AHCS has spent more on fixed assets than the U.S. median in the last two years, resulting in more state-of-the-art facilities. The data suggest that AHCS has a newer physical facility than does its competitor, which may give it a competitive advantage.

The conclusion regarding plant obsolescence is:

- AHCS has kept up with current technology and has been replacing its current physical facilities and investing in new areas.

Capital Position

The last area of performance factors to be reviewed is capital position. Successful firms have profitable operations with reasonable levels of investment. They also keep their cost of financing at a reasonable level. Capital funds in any firm are provided from either debt or equity; and each has a cost. Debt has an explicit cost that can be easily determined by either examining current financing documents or obtaining present bond market yields. Debt also affects the cost of equity capital. Higher levels of debt or financial leverage increase the risk of business failure and lead to higher required returns for invested equity capital, irrespective of its source. A religious, government, community, or investor-owned firm must obtain higher returns on its equity as it raises the level of risk through increased borrowing. We have identified five measures of capital position:

$$\text{Debt Financing \%} = \frac{\text{Total Liabilities}}{\text{Total Assets}} = \frac{52,612}{213,171} = 24.7\%$$

$$\text{Long-Term Debt-to-Equity \%} = \frac{\text{Long-Term Debt}}{\text{Equity}} = \frac{36,068}{160,559} = 22.5\%$$

$$\text{Average Cost of Equity} = \left(\begin{array}{c} \text{Risk Free} \\ \text{Return on} \\ \text{US Govt} \\ \text{Obligations} \end{array} \right) + (\text{Beta of Firm} \times \text{Market-Risk Premium}) = \% 8.7\%$$

$$\text{Cash Flow to Debt \%} = \frac{\text{Net Income} + \text{Depreciation}}{\text{Total Liability}} = \frac{15,793 + 6,307}{52,612} = 42.0\%$$

$$\text{Debt Service Coverage} = \frac{\text{Net Income} + \text{Depreciation} + \text{Interest}}{\text{Principal Payment} + \text{Interest}}$$

$$= \frac{15,793 + 6,307 + 337}{725 + 337} = 21.1$$

AHCS has less financial leverage when compared to U.S. median values. It has borrowed extensively to fi-

nance its capital investment program, but has also used its extensive capital reserves. This increased debt has raised the cost-of-equity capital. AHCS's cost-of-equity capital is explained in Figure 10-4. The cost of a firm's equity increases as debt financing rises, but the firm's weighted cost of capital may not increase. Weighted cost of capital is defined as:

$$\left[\begin{array}{l} \% \text{ of Long-Term} \\ \text{Debt to Equity} \\ \text{plus Long-Term Debt} \end{array} \right] \times \left[\begin{array}{l} \text{Interest} \\ \text{Rate on} \\ \text{Debt} \end{array} \right] + \left[\begin{array}{l} \% \text{ of Equity to} \\ \text{Equity plus} \\ \text{Long-Term Debt} \end{array} \right] \times \left[\begin{array}{l} \text{Cost} \\ \text{of} \\ \text{Equity} \end{array} \right]$$

$$[18\% \times 5.1\%] + [82\% \times 8.7\%] = 8.1\%$$

AHCS has minimal debt at the present, even after its additional borrowing in 2007. Most of its debt is vari-

able rate, with average rates running less than one percent. We have chosen to use a 5.1 percent rate on debt, which better reflects what AHCS would pay on non-variable-rate debt.

The conclusion regarding the capital position of AHCS is:

- AHCS has minimal levels of debt, and its ability to meet debt-service obligations is excellent.

SUMMARY

Our financial review of AHCS suggests possible improvements in profitability. Most of the opportunity for profit enhancement at AHCS is related to both revenue

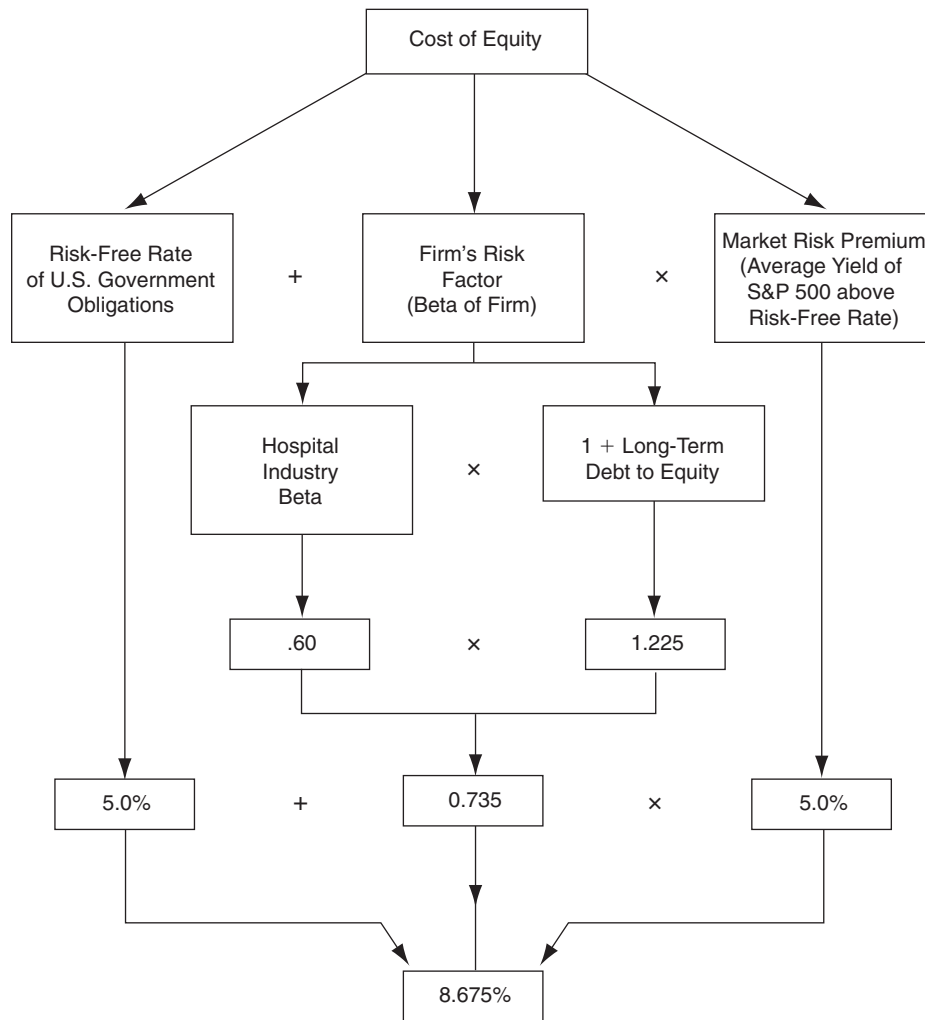


Figure 10-4 AHCS's Cost of Equity

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and cost issues. Areas identified for improvement include the following:

<i>Action</i>	<i>Annual Profit Improvement Range</i>
Increase market share	\$200,000 to \$1,000,000
Increase prices	\$1,000,000 to \$4,000,000
Coding reviews	\$2,000,000 to \$4,000,000
Renegotiate managed care contracts	\$0
Review compensation structure	\$0 to \$5,000,000
Standardize medical and drug supply items	\$1,000,000 to \$3,000,000
Review investment portfolio management	\$0
Reduce accounts receivable	\$100,000 to \$200,000

Implement capital-expenditure contracts	\$0 to \$2,000,000
Total	\$4,300,000 to \$19,200,000

The dashboard approach used in this case can be very helpful in focusing management attention on either potential problems or areas of opportunity. Ultimately, management must, however, make changes. The best dashboard design, combined with accurate and timely reporting, will accomplish nothing without actual management intervention.

REFERENCES

Robert S. Kaplan and David P. Norton, *The Balanced Scorecard*, Harvard Business School Press, 1996.

ASSIGNMENTS

1. Operating margins in your hospital have been consistently below national norms for the past three years. Discuss the factors that might have created this situation and the ways in which you might determine specific causes.
2. Your firm reported net income of \$5,000,000, but the change in equity was only \$3,000,000. What could account for this difference?
3. Determine the amount of incremental profit that would be realized with a ten percent across-the-board rate increase at Thunderbird Hospital. Thunderbird's present payment composition is 80 percent fixed-fee and 20 percent charges or discounted charges. Present operating income is defined below:

Gross patient revenue	\$100,000,000
<i>less</i> Contractual allowances	<u>40,000,000</u>
Net patient revenue	\$60,000,000
<i>less</i> Expenses	<u>59,000,000</u>
Operating income	<u>\$1,000,000</u>

4. You have been reviewing documentation in your medical records department for the last week and have discovered a potential issue with respect to documentation for DRG 127 (heart failure and shock) and DRG 475 (respiratory system diagnosis with ventilator support). You have discovered 20 cases that were coded as DRG 127, when in fact these patients had been put on a ventilator. These patients also had a respiratory system diagnosis. If the respiratory system diagnosis had been the principal diagnosis, these patients would have been coded as DRG 475. If the hospital's base payment rate for a case weight of 1.000 is \$5,000, determine the incremental payment the hospital would have received. Assume the case weight for DRG 127 is 1.000 and 3.700 for DRG 475.
5. Your firm's investment portfolio was valued at \$100,000,000 at the beginning of the year. Approximately 60 percent of the portfolio was invested in fixed-income securities, primarily U.S. government bonds. The remaining 40 percent was invested in mutual funds selected by your firm's portfolio manager. During the year, the U.S. government bonds yielded 6.0 percent, and the change in the Standard and Poor's 500 index was 10.0 percent. Reported investment income during the year was \$6,000,000, including realized gains. The firm also reported an unrealized loss of \$1,000,000. Total yield on the portfolio was thus \$5,000,000. What value would you have expected given the facts above?
6. Your present length of stay on Medicare patients is 6.3 days for 2000 Medicare admissions. This value is unadjusted for case-mix effects. You have discovered that a normal length of stay should have been 5.0 days. If this level had been realized, you would have had 2600 fewer days of care for Medicare patients. You are trying to determine the amount of actual savings that would be realized if the shorter length of stay could be affected. You have been told that a shorter length of stay would affect only direct costs of nursing. Your present direct cost of nursing per day is \$300. Some of this cost is considered fixed and would not be changed. If 60 percent of the nursing cost were considered variable, how much savings would be realized through the length-of-stay reduction?
7. Charles S. Lewis has just been named the CEO of Community Hospital, a 230-bed hospital located in an agricultural community of approximately 150,000 people. There is one

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other similar-sized hospital in the community. C.S. Lewis has been told by his CFO, J.R.R. Tolkein, that the hospital is in excellent financial condition, but Mr. Lewis is not convinced. He has requested and received the summary financial statements presented in Table 10–10.

You have been asked to help Mr. Lewis identify the trends in financial position for the hospital over the last five years. Please compute the values for the financial ratios described in Chapter 10 and provide Mr. Lewis with your assessment of Community Hospital's financial position.

Table 10–10 Summary Financial Information of Community Hospital* (2003–2007) (Data in Thousands)

	2003	2004	2005	2006	2007
Balance sheet accounts					
Cash & cash equivalents	\$ 34,402	\$ 30,444	\$ 45,848	\$ 46,010	\$ 73,711
Patient accounts receivable	39,506	38,878	35,444	38,853	35,647
Inventory	2,133	2,318	2,398	3,197	3,279
Gross fixed assets	187,278	221,548	240,988	256,652	276,458
Accumulated depreciation	73,227	79,523	89,324	101,007	113,851
Net fixed assets	114,051	142,025	151,664	155,645	162,607
Unrestricted capital funds	<u>10,720</u>	<u>13,625</u>	<u>20,160</u>	<u>25,615</u>	<u>17,716</u>
Total assets	\$ 238,365	\$ 265,784	\$ 276,965	\$ 287,193	\$ 311,140
Current maturities of LTD	111	1,794	1,431	2,211	1,143
Current liabilities	\$ 37,426	\$ 38,492	\$ 33,240	\$ 31,699	\$ 35,862
Long-term debt	2,032	12,821	11,720	9,578	9,570
Net assets	\$ 188,743	\$ 204,262	\$ 222,606	\$ 237,022	\$ 251,241
Income statement accounts					
Net patient revenue	\$208,861	\$ 225,950	\$ 244,976	\$ 257,784	\$ 282,461
Other revenue	<u>1,569</u>	<u>1,756</u>	<u>1,929</u>	<u>2,170</u>	<u>1,757</u>
Total operating revenue	\$ 210,430	\$ 227,706	\$ 246,905	\$ 259,954	\$ 284,218
Total operating expenses	\$ 203,043	\$ 219,768	\$ 233,867	\$ 254,382	\$ 278,629
Operating income	7,387	7,938	13,038	5,572	5,589
<i>plus</i> Non-operating revenue	<u>6,806</u>	<u>7,579</u>	<u>8,971</u>	<u>8,430</u>	<u>8,696</u>
Excess of revenue over expenses	\$ 14,193	\$ 15,517	\$ 22,009	\$ 14,002	\$ 14,285
Depreciation	\$ 10,588	\$ 11,161	\$ 11,659	\$ 12,184	\$ 12,524
Interest	115	611	471	419	392

*Please note that not all asset and liability items are shown. The totals do not, therefore, foot to the individual account values.

SOLUTIONS AND ANSWERS

1. Low operating margins are the result of either low prices or high costs. Low prices may be difficult to change in either competitive markets or situations involving high percentages of fixed-price payers, such as Medicare. High costs may result from excessive length of stay, poor productivity, or high salaries.
2. A transfer of funds from the entity may have taken place. This is often the case in investor-owned companies, because of the payment of dividends. It also may occur in a voluntary entity because of corporate restructuring. Unrealized losses on the firm's investment portfolio may have occurred.
3. The amount of incremental profit is equal to the percent of charge patients \times price increase \times present gross patient revenue, or \$2,000,000. The increase in charges is \$10,000,000, or 10 percent times \$100,000,000. Of that amount, 20 percent, or \$2,000,000, will be to charge or discounted-charge payers.
4. The difference in payment would be 20 patients \times \$5,000 \times (3.700 - 1.000), or \$270,000.
5. The expected yield should have been \$7,600,000:

$$\text{Expected fixed-income yield} = \$60,000,000 \times 6.0\% = \$3,600,000$$

$$\text{Expected equity yield} = \$40,000,000 \times 10\% = \$4,000,000$$

6. The estimated savings would be days saved \times direct cost of nursing \times variable cost percentage (2,600 \times \$300 \times 60%), or \$468,000.
7. Only selected financial ratios for Community Hospital can be calculated for the period 2003 through 2007. These values are shown in Table 10-11, Major observations that would result include the following:
 - Present financial position at Community Hospital is strong. Current financial strength is a result of two primary factors: minimal levels of long-term debt and above-average total margins.
 - The trend in margins is downward, however. The primary cause is an erosion of operating-income levels. Expenses have been growing more rapidly than revenues since 2005.

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Table 10–11 Selected Financial Ratios

	2003	2004	2005	2006	2007
Overall					
Return on equity %	7.5	7.6	9.9	5.9	5.7
Total margin %	6.5	6.6	8.6	5.2	4.9
Financial strength index	2.2	1.9	3.1	2.2	2.3
Non-operating income					
Days' cash-on-hand	86	77	108	108	125
Investment efficiency					
Days in accounts receivable	69	63	53	55	46
Revenue to net fixed assets	1.9	1.7	1.7	1.7	1.8
Plant obsolescence					
Average age of plant	6.9	7.1	7.7	8.3	9.1
Capital position					
Debt financing %	20.8	23.1	19.6	17.5	19.3
Cash flow to debt %	49.9	43.4	61.9	52.2	44.8