About the Author and this Primer

**Felix Kaufman, Ph.D., CPA,** is a retired partner of the firm of Coopers & Lybrand. During his 23-year career with the firm, Mr. Kaufman held senior positions in the consulting practice, including 10 years as National Director of Management Consulting Services.

Mr. Kaufman is a former Trustee of the Hospital for Joint Diseases Orthopaedic Institute in New York City and New York University Health Center. He served as Treasurer and Chairman of the Budget and Finance Committee at the Hospital for Joint Diseases.

Mr. Kaufman earned a Ph.D. degree from the University of Chicago Graduate School of Business. From 1974 to 1976, he was President of the Institute of Management Consultants.

Mr. Kaufman authored the first three editions this primer, which Kaufman, Hall & Associates published in 1993, 1996, and 2005, respectively. The demand for the publication from trustees and healthcare executives was strong and has not abated.

As a result, Kaufman, Hall & Associates prepared this fourth edition in tribute to Felix Kaufman and his enduring contribution to healthcare financial management and governance education. Revisions appear in all sections to reflect new developments in the field.

As a mark of the primer’s significance, The Governance Institute, which is known nationally for its quality board education initiatives, is producing and including this new edition in its Elements of Governance series, made available to all member hospitals and health systems. The commendation is appreciated.

About Kaufman, Hall & Associates

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Founded in 1985, Kaufman, Hall & Associates, Inc. is among the country’s most respected independent strategic financial and capital consultants, working with healthcare organizations of all types and sizes.

The firm provides strategic advisory services; financial advisory services to debt transactions; strategic, financial, and capital planning services; capital allocation design and implementation services; and merger, acquisition, joint venture, real estate, and divestiture advisory services.

In addition, Kaufman Hall developed and markets the ENUFF® Software Suite of strategic and financial management products. Kaufman Hall serves its clients from offices in Chicago, Atlanta, Boston, Los Angeles, New York, and San Francisco. For more information, visit kaufmanhall.com.

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Introduction

The worldwide economic crisis, which cascaded through the U.S. capital and credit markets in 2007 and 2008, is significantly altering the financial and competitive landscape of the nation’s hospitals and health systems. In the current environment, all healthcare organizations are facing difficult financial challenges with potentially game-changing strategic implications.

Careful and credible decision making by trustees and executives is more critical than ever. Decisions must reflect financial expertise and a thorough understanding of the organization’s financial condition.

The intent of this publication is to facilitate improved financial decision making by providing board members and senior leaders with an easy-to-understand guide to the basic principles of healthcare accounting, reimbursement, and finance. Readers are advised to seek in-depth information, as required in each specific circumstance.

A Note about the Financial Statements

This publication includes sample financial statements and statistics to illustrate certain general points and principles. The documents do not represent those from an actual organization. Because the presentation of financial statements differs by organization, please consult your senior financial executive for information about your organization’s specific methodology.

A Note about Terminology

Although the term hospital and organization appear interchangeably throughout the publication, the focus of this publication is not-for-profit acute care facilities.
Key Accounting Principles and Concepts

Measuring Revenues and Expenses with Accrual Accounting

Accountants measure profit or loss by applying a concept called accrual accounting. This is a way of accurately comparing the organization’s income against its expenses over time. The timing in “recognizing” each of these events is central to the accrual method, which is used by all organizations. In healthcare, accrual accounting entails deciding when patients have received services for which the organization is entitled to income, as well as how and when the cost of these services is measured. Key points of accrual accounting include the following:

1. Income (revenue) is earned when services are provided. A patient in a bed is receiving a service.
2. Expenses are the costs of providing material and service to the parties that receive the service, when the service is being provided.
3. The timing of when an organization gets paid for the services it renders, or when it pays for the materials and services it purchases, is irrelevant to the accrual accounting method. Cash flow is a separate issue for consideration.
4. The accurate measurement of profits or losses depends upon the correct matching of services provided and the costs of providing these services.

Services and materials can be paid for long after they have been received and consumed; reimbursement for services provided may occur long after the provision thereof, but the synchronization of cash flows with the proper measurement of income and expense is usually accidental. To illustrate these ideas, let’s look first at the measurement of inpatient revenue.

Allocation of Revenue (Income)

There are several ways of being paid for patient care. The recognition of revenue depends upon the payment method. Imaginative payers may come up with new reimbursement approaches during these turbulent times, but currently there are three key methods:

- **Case Basis:** Also called prospective payment, this has been the dominant reimbursement method due to the adoption by Medicare of diagnosis-related groups (DRGs), now called Medicare severity diagnosis-related groups (MS-DRGs). These are described fully in the section entitled, How Hospitals Are Paid (see page 6). Within specified parameters, the hospital or health system is paid a set fee for the care of a patient who has a certain condition, regardless of how long he or she is hospitalized or how many resources are consumed during the stay.
- **Per Diem:** Under this type of reimbursement, the hospital or health system receives an agreed-upon amount per patient day. For a long time, per diem was the only method of payment used, but it was cost per
diem. The provider set the price. Now it is contractual per diem, and the payer generally sets the price.
- **Capitation:** The hospital or health system receives a fixed amount per enrolled individual per month or year to cover a specified list of medical services. The provider is paid regardless of whether medical services are used and conversely bears all cost overruns.

A fourth payment method used by commercial indemnity plans and some PPOs involves payment of a percentage of charges.

Realization of Revenue

When does the healthcare organization realize income for providing service to patients? Theoretically, hospitals or health systems accrue income continuously while the patient is in the hospital. Measuring income continuously, however, is neither practical nor necessary. For the case basis, patient revenue in a particular month is the total of the following:

- The full fee for all patients admitted and discharged in the specific month; plus
- The prorated portion of total revenue for all patients admitted in a previous month and discharged this month; plus
- The prorated portion for all patients who are still in the facility past the month’s end.

By prorated, we mean the estimate of the portion of the total fee that we consider earned for the patient’s care, as of the end of the period. This process seems straightforward in terms of its logic, but prorated allocation is difficult. There are also complications in applying appropriate rates.

For the per diem basis, income is determined by multiplying the per diem rate by the number of days actually spent by patients in the hospital during the time period being accounted for.

Observations about the revenue recognition implications of capitation appear in the section entitled, The Impact of the New Payment Environment (see page 12).

Revenue realization is simpler for outpatient activity. Since service is rendered on a one-day basis, there are no allocation issues.

Cash Accounting

Cash accounting is a simple alternative to accrual accounting. Using this method, an organization recognizes income when the payer pays for the service; the organization incurs an expense when it pays for the costs involved. With cash accounting, a million-dollar sale in December 2008, paid for in 2009, is income in 2009.

Cash accounting and cash flow are not the same things. Cash accounting is one approach for recognizing income and expense; cash flow is an analysis of past, present, or prospective cash activity. Cash flow is a vital indicator of an organization’s financial performance. Cash accounting is mentioned here only to facilitate an understanding of the accrual methodology.
Expense Recognition

A number of timing issues arise in recognizing expenses under the accrual method. The first and easy case involves recognizing the steady flow of invoices for materials and services that are to be consumed promptly to provide patient care. Typically, such transactions are recognized as expenses when the invoices are recorded (see Exhibit 1).

**Exhibit 1. Recognize Expenses Immediately**

<table>
<thead>
<tr>
<th>Invoices arrive and are recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goods and services are consumed quickly</td>
</tr>
<tr>
<td>Expenses are recognized</td>
</tr>
</tbody>
</table>

Source: Kaufman, Hall & Associates, Inc.

A second category involves the purchase of goods and services for which an obligation is incurred, but where the goods and services are used during more than one accounting time period (see Exhibit 2). For example, consider an insurance premium that is paid on July 1 and provides insurance protection for one year from that date. If the accounting year ends in December, it is necessary to prorate the premium. One half is an expense of the current period; the other half is an asset pending transfer to the expense category in the next year. These items are commonly called prepaid expenses and appear on the left side (the asset side) of the organization’s balance sheet.

**Exhibit 2. Prepayments**

<table>
<thead>
<tr>
<th>Payments for goods and services that are consumed over more than one accounting period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record portion consumed in current period as expense</td>
</tr>
<tr>
<td>Defer portion not consumed as an asset called prepaid expense</td>
</tr>
</tbody>
</table>

Source: Kaufman, Hall & Associates, Inc.

A third category of expense recognition involves charges for services that have been provided to the organization but, for various reasons, no paperwork yet exists. For example, our auditors finish the 2008 audit in 2009. To recognize that cost in 2008, an entry must be made even before there is final knowledge of the amount. Such transactions, known as accrued expenses, run the gamut from situations where the overlap into a future period is very brief, to new circumstances that will not be explicit until some time well into the future.

There are many types of accruals, but a common example involves payrolls. At the end of a month, wages and salaries for the last few days of the month will not be recorded until the payroll for that week is paid, for example, during the first week of the following month. The cost of the overlapping days belongs to the current month (see Exhibit 3) and is a liability on the right side (the liability side) of the organization’s balance sheet.

**Exhibit 3. Accrued Expenses**

<table>
<thead>
<tr>
<th>Week ending 12/30/08</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 year ends</td>
</tr>
<tr>
<td>Allocate one day to 2008</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week ending 1/6/09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payroll for this week includes 12/31/09</td>
</tr>
</tbody>
</table>

**Case 2: Professional Expenses**

<table>
<thead>
<tr>
<th>12/31/08</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 year ends</td>
</tr>
<tr>
<td>CPA finishes 2008 audit</td>
</tr>
<tr>
<td>CPA submits bill; hospital pays</td>
</tr>
</tbody>
</table>

Accrue cost of audit now on estimated basis; set up a liability

Eliminate liability

Source: Kaufman, Hall & Associates, Inc.

**Depreciation**

Buildings, major equipment, and computers are fixed assets. They last for a relatively long time and are disposed of when their productivity declines due to advances in technology, the high cost of repairs, and so forth. To recognize such items as expenses, we allocate their cost over their estimated useful life and enter that dollar amount on the income statement. We call this depreciation.

Accountants base the depreciation calculation on the cost of the asset and its expected life. A percentage of the cost is then apportioned to each accounting period of the item’s useful life. Even though the market value of certain fixed assets, notably land and buildings, may appreciate dramatically, these increases do not appear on the financial statements and do not affect the depreciation calculation. Incidentally, the value attributed to land itself cannot be depreciated. The cash flows associated with financing a depreciating asset do not enter into the depreciation accounting charge. A separate accounting entry recognizes the purchase of the asset, which may also involve creating a liability.
Exhibit 4 illustrates the concept of depreciation. Exhibit 5 illustrates the fact that the cash flows associated with financing a depreciable asset are not coincident with the depreciation process.

Exhibit 4. Recording Depreciation

2010
Building put in service
Cost $30,000,000
Estimated life is 30 years

2011
Record $1,000,000 as depreciation expense each year

2020
Building appraised
Market value is $60,000,000
Depreciation charge is not adjusted, nor is balance sheet

2040
Asset is fully depreciated

Source: Kaufman, Hall & Associates, Inc.

Exhibit 5. Paying for Building

2010
Building cost is $30,000,000
Pay $5,000,000 up front
Get $25,000,000 loan

2030
Retire loan in 20 years paying principal plus interest

2040
These arrangements are not related to the depreciation accounting charge shown in Exhibit 4

Source: Kaufman, Hall & Associates, Inc.

Accounting Reports

Accounting reports are generated on a regular basis to provide information on the hospital or health system’s activities and performance. Regular reporting is necessary for meaningful comparisons by different audiences (see Table 1). Standard reports include:

- Statement of Operations and Changes in Net Assets (also referred to as the Statement of Profit and Loss or the Statement of Revenue and Expenses)
- Balance Sheet
- Statement of Cash Flows

Beyond these, each organization generally has a variety of detailed reports and exhibits. The principal reporting time period is the fiscal year. Some public reporting is done quarterly, as in the case of publicly placed financial transactions; internal reporting is done monthly or more frequently.

Table 1. Different Reports for Different Audiences

<table>
<thead>
<tr>
<th>Recipients</th>
<th>Period</th>
<th>Reports Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>Annually*</td>
<td>Annual report (based on audit) includes:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Statement of Operations and Changes in Net Assets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Balance Sheet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Statement of Cash Flows</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Audit Certificate</td>
</tr>
<tr>
<td>Trustees</td>
<td>Monthly or quarterly</td>
<td>Periodic package includes:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Statistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Statement of Operations and Changes in Net Assets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Balance Sheet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Statement of Cash Flows</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Variances from budget</td>
</tr>
<tr>
<td>Management</td>
<td>Monthly, weekly, and as required</td>
<td>Periodic package in greater detail:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Departmental analyses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Product line analyses</td>
</tr>
</tbody>
</table>

*Some public reporting is done quarterly, as in the case of publicly placed financial transactions. Source: Kaufman, Hall & Associates, Inc.

Reporting of Charity Care and Community Benefit

Beginning fiscal year 2009, the Internal Revenue Service requires all tax-exempt hospitals to itemize charity care and other uncompensated community benefits, in order to demonstrate compliance with the community benefit standard. The final reporting form—Schedule H, Form 990—also includes reporting of Medicare underpayment and patient bad debt, two important categories of uncompensated care.

The IRS’s goal with Schedule H is increased transparency and accountability among not-for-profit hospitals. Says AHA President and CEO Rich Umbdenstock, “The improvements that IRS made to Schedule H will help communities throughout the nation better understand the incredible range of programs, services, and activities that hospitals provide to those they serve every day.”

How Hospitals Are Paid

Reimbursement

Federal, state, and occasionally local regulatory agencies play a role in the hospital or health system’s payment. While often negotiated, payment occurs within a structured framework.

For patients who are covered by governmental programs such as Medicare or Medicaid, government agencies:

- Define the medical procedures for which there will be payment.
- Assign weights to the procedures to adjust payment for varying factors (for example, acuity levels).
- Establish the mechanism for attaching dollar values to medical procedures.
- Define exceptions.

Private payers, usually insurance companies, will often follow the government’s lead in using its framework for payment (the case-rate approach).

Who Are the Payers?

Hospitals receive payments from four chief sources:

- The federal government, which administers the Medicare program through regional Medicare intermediaries or carriers
- State and local governments, which administer the Medicaid program through approved carriers
- Private payers, including non-profit Blue Cross Blue Shield and commercial insurance companies, which offer a wide range of healthcare plans
- Patients and their families, who usually bear part of the cost of healthcare services through deductibles and copayments, and sometimes, when they have no third-party insurance, bear the full cost of the services as “self payers”

Payer distribution or “mix,” different for each hospital, is often critical to organizational profitability. Exhibit 6 provides a sample payer mix. A hospital or health system’s payer mix can vary substantially by the type of market, geographic location, and specific services provided. Large hospitals and health systems may have hundreds of private payers, some of which are profitable and some of which may not be profitable for the hospital.

How profitable is it to provide services to a Medicare or Medicaid beneficiary compared to a privately insured patient? Payment-to-cost ratios for community hospitals indicate that neither Medicare nor Medicaid covered all hospital costs for treating their patients. Medicare’s payment-to-cost ratio (91.3 percent) was higher than

Exhibit 6. U.S. Payer Mix

Price Transparency

The push for hospitals to make their prices public or “transparent” is widespread and growing, fueled by federal and state governments, insurers, and consumers. The transparency imperative is likely to increase as consumers assume higher “out-of-pocket” costs.

Price transparency requires hospitals to provide the patient with information on the costs associated with a service prior to the provision of the service. The goal is to provide patients with meaningful information about their financial obligations and data that will enable them to compare prices between hospitals.

The challenge for hospitals is that hospital payment mechanisms that link financing and pricing are complex. Hospital pricing systems commonly range from chargemaster or fee-or-service price lists to bundled payment systems such as Medicare severity diagnosis-related groups (MS-DRGs).

Achieving meaningful transformation of the U.S. hospital pricing system to facilitate price transparency is a vastly complex endeavor, requiring collaboration among providers, payers, government, employers, and consumers. The Healthcare Financial Management Association (www.hfma.org) has published numerous reports and recommendations regarding ways hospitals can move toward a more rational pricing system.
Medicaid’s (85.8); private payers covered 130.3 percent of cost.1 Experts caution against comparing payment levels across payer types, however, because patient service mix and intensity vary.2

What Are the Sources?

Where does the payers’ money come from?

- Medicare is funded by a federally imposed payroll tax.
- Medicaid is funded by the federal government (at least 50 percent), state governments (up to 50 percent), and in some states, by local governments as well.
- Other commercial and non-profit payers receive payments from employers and employees, or in some cases, from individuals purchasing insurance coverage on the open market. Managed care organizations frequently provide benefits to individuals through employers.

Medicare is a federal program operated by the Centers for Medicare & Medicaid Services (CMS), a federal agency within the U.S. Department of Health and Human Services.

Established in 1965 through the Social Security Act, Medicare is the national health insurance program for:

- People age 65 or older
- Some people under age 65 with disabilities
- People with end-stage renal disease (ESRD), which is permanent kidney failure requiring dialysis or a kidney transplant

Medicare is made up of two separate trust funds:

- Hospital Insurance (HI) Trust Fund, otherwise known as “Medicare Part A” for inpatient-related care. This is funded primarily through payroll and social security taxes.
- Supplementary Medical Insurance (SMI) Trust Fund, otherwise known as “Medicare Parts B and D” for physician and other outpatient services (Part B) and prescription drugs (Part D). This is funded primarily through federal revenues and premiums charged to the beneficiaries.

In 2008, Medicare provided coverage to approximately 44 million Americans. Medicare reimbursement rates can change each October in response to the latest federal budget submitted in September of each year.

Medicaid is a state-administered program for disabled and low-income individuals and families who cannot afford to pay for some or all of their medical care.

The Medicaid system is not a carbon copy of the Medicare system. Each state sets its own guidelines regarding eligibility and coverage subject to federal rules and guidelines. Certain services must be covered by the states in order to receive federal funds; other services are optional and are elected by states. States cannot diminish the benefits stipulated by federal regulation, but they can make changes to the payment schedule and they can adopt per diem payment. Benefits for Medicaid recipients and Medicaid payments to providers vary from one state to another.

According to the National Association of State Budget Officers, Medicaid expenditures represented the largest proportion of all states’ expenditures by function (22.2 percent). When states have fiscal problems, they often need to reduce Medicaid expenditures. At least 27 states plus the District of Columbia, including several of the nation’s largest states, faced or are facing an estimated $47 billion in combined shortfalls in their fiscal year 2009 budgets.

- Family/individual incomes pay for expenditures on premiums, copayments, and deductibles. Given the increasing number of uninsured Americans, full payment for hospital services by patients is becoming more common. In a tough economic climate, a proportion of self-pay patients may not be able to pay for hospital services. Even when insured, patients and their families are required to pay for procedures not covered by their insurer.

Table 2. Sources of Reimbursement Dollars

<table>
<thead>
<tr>
<th>Payer</th>
<th>Administered By</th>
<th>Sources of Money</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare</td>
<td>Federal government</td>
<td>• Social Security payroll tax</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Participant premiums</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Patient deductibles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Patient coinsurance</td>
</tr>
<tr>
<td>Medicaid</td>
<td>State and localities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Federal government</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Employee and employer premiums</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Patient deductibles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Patient coinsurance</td>
</tr>
</tbody>
</table>

A recent review of the distribution of personal healthcare expenditures by source of payment indicates that three categories of payment—prescription drugs (10.1 percent), hospital care (30.8 percent), and physician and clinical services (21.2 percent)—account for approximately 62 percent of total spending.1

It is hard to exaggerate the complexity of the current hospital payment environment and the processes required of hospitals to obtain payment for services provided. A brief review of how the payment system has evolved might be helpful at this point.

From Retrospective to Prospective Reimbursement

A look at the 1970s establishes the foundation. At that time, hospital payment was based upon per diem costs as set by the hospital. A hospital calculated the cost of a patient day based on actual data viewed retrospectively and based its billed charge on this cost. It was a no-lose system; hospitals were sure to cover their expenditures. It was also a lazy system; there was no incentive to minimize cost. As services provided to patients in their organizations increased, so too did the payment received by the organization.

Under this retrospective fee-for-service system, healthcare was consuming an ever-increasing share of national expenditures. In 1960, national health expenditures of $27 billion consumed 5.1 percent of gross domestic product (GDP). By 1980, health expenditures had soared to $246 billion and share of GDP increased to 12 percent.2

As a result, political and economic pressure to control healthcare costs began to be intense in the early 1980s. A new set of legislative initiatives resulted in the prospective payment system (PPS) for Medicare in 1983. The PPS approach was quickly mirrored by state Medicaid programs in 1986 and private insurers in the mid- and late 1980s.

In contrast to the retrospective cost payment system, PPS had a built-in incentive for hospitals and other healthcare organizations to control costs. Only prospectively approved costs, based on diagnosis-related groups (DRGs)—a patient disease classification system that adjusts for acuity differences—were now covered. If actual costs exceeded these, the hospital suffered a financial loss. The prospective or case-based payment system replaced the cost-based reimbursement system and continues to this day to be the operant payment system in this country.

In the late 1970s and 1980s, managed care and other forms of prepaid healthcare offered by employers also drove healthcare cost reductions. Managed care is called what it is because the managed care organization (MCO) manages or monitors the patient care process, striving to pay only what it thinks is justified if services are performed efficiently. The goal, of course, is to reimburse only those services deemed by the MCO to be needed.

Through the Health Maintenance Organization (HMO) Act of 1973, the federal government established grants and loan guarantees for HMOs, and established ambitious enrollment goals.3 HMO enrollment reached a high of 31 percent of covered workers in 1996 and began a steady decline,4 with enrollment falling to 20 percent in 2008.5 However, other managed health plan types, including preferred provider organizations (PPOs) gained considerable market share. In 1988, 73 percent of covered workers had traditional fee-for-service indemnity insurance. In 2008, PPOs had captured 58 percent of insured workers and only 2 percent of workers had traditional indemnity coverage6 (see Exhibit 7 on the next page). The decline is a direct result of the PPO enrollment growth, which was driven by cost and increased provider choice.

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1 Kaiser Family Foundation, Trends and Indicators in the Changing Health Care Marketplace Chartbook, 2008 Update.
2 Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group.
3 Tufts Managed Care Institute, A Brief History of Managed Care, 1998, available at www.thci.org/downloads/BriefHist.pdf.
The alphabet soup of managed care:
Selected Definitions

Health maintenance organization (HMO): A managed care plan that integrates financing and delivery of a comprehensive set of healthcare services to an enrolled population. HMOs may contract with, directly employ, or own participating healthcare providers. Enrollees are usually required to choose from among these providers and in return have limited copayments. Providers may be paid through capitation, salary, per diem, or pre-negotiated fee-for-service rates.

Independent practice association (IPA): An HMO that contracts with individual physicians or small physician groups to provide services to HMO enrollees at a negotiated per capita or fee-for-service rate. Physicians maintain their own offices and can contract with other HMOs and see other fee-for-service patients.

Managed care organization (MCO): An organization that offers a health plan that uses managed care arrangements and has a defined system of selected providers that contract with the plan. Enrollees have a financial incentive to use participating providers that agree to furnish a broad range of services to them. Providers may be paid on a pre-negotiated basis.

Physician/hospital organization (PHO): An organization that contracts with payers on behalf of one or more hospitals and affiliated physicians. The PHO may also undertake utilization review, credentialing, and quality assurance. Physicians retain ownership of their own practices, maintain significant business outside the PHO, and typically continue in their traditional style of practice.

Point-of-service plan (POS): A managed care plan that combines features of both prepaid and fee-for-service insurance. Health plan enrollees decide whether to use network or non-network providers at the time care is needed and usually are charged sizable copayments for selecting the latter.

Preferred provider organization (PPO): A health plan with a network of providers whose services are available to enrollees at lower cost than the services of non-network providers. PPO enrollees may self-refer to any network provider at any time.


Exhibit 7. Health Plan Enrollment for Covered Workers, by Plan Types (percentages)

<table>
<thead>
<tr>
<th>Plan Type</th>
<th>2004</th>
<th>1988</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional</td>
<td>5%</td>
<td>25%</td>
</tr>
<tr>
<td>HMO</td>
<td>16%</td>
<td>25%</td>
</tr>
<tr>
<td>PPO</td>
<td>55%</td>
<td>16%</td>
</tr>
<tr>
<td>POS</td>
<td>73%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Note: New plan types include high-deductible health plans (HDHPs) and point of service (POS), neither of which were available in 1988.

Source: Kaiser Family Foundation/Health Research and Education Trust, Employer Health Benefits, 2008 Annual Survey

PPS and Diagnosis-Related Groups

The prospective payment approach assumes that the degree of care required (case intensity) is a function of the patient’s diagnosis and that payment to the provider should be based on the intensity of care and resources required by the specific diagnosis.

Diagnosis-related groups (DRG) were developed by a group of researchers at Yale University in the late 60s as a tool to help clinicians and hospitals monitor quality of care and utilization of services. The DRG concept is founded on the theory that patients in each category or DRG have the same clinical and resource needs. In 1983, DRGs became the system used by Medicare to pay hospitals.

Effective October 2007, the Centers for Medicare & Medicaid Services (CMS) revised its Medicare reimbursement system and increased the approximately 500 DRG codes in use to 746 codes, now called MS-DRGs or Medicare severity diagnosis-related groups. The purpose of expansion was to provide more granularity to Medicare reimbursement, in particular as it pertains to higher-acuity services. At the same time, CMS changed many of the weights associated with various MS-DRGs, alleviating some of the pressure on overall base-rate reimbursement increases.
CMS has defined 746 MS-DRGs, in which patients are grouped together diagnostically for billing purposes. Hospitals are paid a set fee for treating patients in a single MS-DRG category, regardless of the actual cost of care for the individual. The 746 MS-DRGs represent groupings of 10,000+ of the ICD-9-CM codes into a more manageable number of meaningful patient categories. ICD-9-CM is the International Classification of Diseases, Ninth Revision, Clinical Modification—a diagnosis and procedure classification system available through the National Center for Health Statistics.

How MS-DRG-Based Payment Is Determined
MS-DRGs are based upon acuity and are “weighted,” according to the severity of the patient’s illness, which can indicate the intensity of care or services needed. Sicker patients require more of the hospital’s care and resources. A patient or “case” with a weight of 2.0 is deemed to be double the intensity and hence require double the costs (and payment) of a case with a weight of 1.0, which is the baseline weight. A particular hospital’s cost, however, is not directly involved in this determination.

All things being equal, it is preferable to have more cases with higher weights. Even though these cases involve higher costs, they generate higher payments levels, which typically cover the extra costs. Hospitals strive to increase case-mix intensity (i.e., attract patients with higher acuity levels).

Each hospital has a unique MS-DRG distribution. Looking at which MS-DRGs account for most of an organization’s activity can be helpful (see Tables 3 and 4). For a particular MS-DRG, a hospital may have many, few, or no cases.

### Table 3. DRG Characteristics at an Orthopaedic Hospital

<table>
<thead>
<tr>
<th>Conditions</th>
<th>MS-DRG Value Medicare</th>
<th>Type of Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest weight</td>
<td>9.83</td>
<td>Combined anterior/posterior spinal fusion with major complications/co-morbidity (MCC)</td>
</tr>
<tr>
<td>Most frequent procedure</td>
<td>3.29</td>
<td>Major joint replacement or reattachment of lower extremity with MCC</td>
</tr>
<tr>
<td>Most frequent procedure with an MS-DRG at or near 1.0</td>
<td>1.01</td>
<td>Signs and symptoms of musculoskeletal system and connective tissue with MCC</td>
</tr>
<tr>
<td>Procedure with lowest weight, which occurs with some frequency</td>
<td>0.58</td>
<td>Signs and symptoms of musculoskeletal system and connective tissue without MCC</td>
</tr>
</tbody>
</table>

Source: Kaufman, Hall & Associates, Inc.

### Table 4. MS-DRGs by Discharges for a Sample Hospital

<table>
<thead>
<tr>
<th>Number of Discharges</th>
<th>MS-DRG Number</th>
<th>Description</th>
<th>Percent of Total Discharges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,376</td>
<td>795</td>
<td>Normal newborn</td>
<td>16.7</td>
</tr>
<tr>
<td>1,098</td>
<td>775</td>
<td>Vaginal delivery without complicating diagnoses</td>
<td>13.4</td>
</tr>
<tr>
<td>161</td>
<td>194</td>
<td>Simple pneumonia and pleurisy age &gt;17 with complications/co-morbidities</td>
<td>2.0</td>
</tr>
<tr>
<td>150</td>
<td>391</td>
<td>Esophagitis, gastroent, and misc digest disorders age &gt;17 with complications/co-morbidities</td>
<td>1.8</td>
</tr>
<tr>
<td>136</td>
<td>292</td>
<td>Heart failure and shock</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Note: For this community hospital, the top 10 MS-DRGs account for 46 percent of discharges; the top 20 MS-DRGs account for 57 percent of discharges.

Source: Kaufman, Hall & Associates, Inc.

### Table 5. Determining the Payment Level for a Particular Case

<table>
<thead>
<tr>
<th>If the MS-DRG weight is 2.0</th>
<th>And the base rate or the value of a case with a weight of 1.0 is $5,000</th>
<th>Then the value of a specific case is $10,000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.0 × $5,000 = $10,000</td>
<td></td>
</tr>
</tbody>
</table>

Source: Kaufman, Hall & Associates, Inc.

Base rate: To fully understand the MS-DRG system, one needs to understand the concept of a base rate. The base rate is what a hospital gets paid on an MS-DRG having an intensity of 1.0. CMS determines the base rate nationally and adjusts it for regional and/or local differences, such as higher wage rates. In the case of teaching hospitals, there are adjustments to help academic medical centers cover the costs involved in medical education. There are also adjustments to reflect the use of capital.

Each patient is assigned an MS-DRG that represents that patient’s diagnostic condition and has a service intensity weight. That weight is multiplied by the dollar value of an MS-DRG with a weight (intensity) of 1.0 (the base rate). The result is the dollar value of the specific case. Table 5 illustrates a dollar value of a specific case to be $10,000, assuming a base rate of $5,000. If the hospital is a teaching hospital, for example, the base rate may be set at a higher level (for example, $7,000), thereby yielding a higher specific case value of $14,000 for an MS-DRG with the same weight of 2.0.
Length of Stay

Length of stay (LOS) is used to measure the duration of a single episode of hospitalization. It is measured on a per-patient basis in whole numbers (days), and calculated by subtracting day of admission from day of discharge. Average length of stay (ALOS) is the average number of days patients stay in a facility. It is calculated by dividing the total number of days all patients stayed in the hospital by the number of patients discharged for the same given period of time. Statistical reports that include ALOS invariably result in fractional numbers due to averaging the experience of more than one patient.

Hospitals, employers, and others commonly use ALOS as a key indicator of hospital efficiency and utilization. Given rising healthcare costs, pressures to reduce such costs, and MS-DRG-based payment, hospitals are under increasing pressure to reduce ALOS. In 1975, ALOS nationwide was nearly 8 days; by 1995, it had dropped to approximately 6 days, and had declined further to 5.6 days in 2006.

Length of stay has cost and revenue implications. Consider what happens when a hospital’s management team, during the financial and budget planning process, establishes reduced LOS as an operational goal. At the same time, the management team also plans to achieve the same number of discharges and the same level of overall patient care activity with fewer beds. The team reduces the number of beds and staffing commensurate with the bed reduction. Patients must be “moved through” the hospital quicker, which thereby will reduce LOS. This decision for planned capacity reduction can achieve major economies resulting from nursing and offer staff reductions, reduced space costs, and other factors.

Exhibit 8. Potential Advantage of Shorter Lengths of Stay

When hospitals were paid on a cost per diem basis, keeping a patient longer meant more revenue. This is no longer the case. Prospective or case rates are based on the length of stay deemed appropriate to the case. Thus, if a patient is hospitalized for longer than the LOS deemed appropriate to the case, the case-rate payment is unlikely to cover the complete costs incurred by the hospital.

A hospital expects to incur costs of $1,000 per day to care for a patient with a particular MS-DRG. If the MS-DRG is compensated at a flat rate of $10,000, the implied LOS should be 10 days. If the patient stays 20 days, the hospital still receives only $10,000. There are some exceptions (called “outliers”) when additional payment is warranted.

A “catch 22” may occur if 10 days are authorized and only eight are needed. This appears to be the classic example of a desirable development. However, the payer might indicate that if the hospital only needed eight days, the payer would only pay for eight days. In this case, the lower LOS has an adverse effect on revenue, although it may be offset by a cost benefit. LOS is complicated.

Shorter lengths of patient stays can result in unoccupied beds in an active nursing unit. The benefit of this situation is that variable costs

Source: Kaufman, Hall & Associates, Inc.

9 Milliman USA (www.milliman.com) and other organizations publish national LOS data.
are saved. Such costs (for example, meals) are dependent on occupancy rates. Nursing costs go up and down in a step-wise manner; unoccupied beds today may not necessarily result in adjusted nurse staffing. Exhibit 8 illustrates some of these situations.

In a hospital’s monthly reporting of LOS, there is an inference that reductions are necessarily beneficial. For example, a report notes that last month LOS was 5.9; this month it is 5.7. The reduction of 0.2 days is deemed to be the basis of cost savings, but it is hard to “monetize.” For better or worse, reducing LOS and thereby discharging patients sooner is an ever-present pressure for all hospitals.

The Impact of the New Payment Environment

Managed care, not as strong a force as it was in the 1990s, changed the complexion of reimbursement accounting. Payment rates in a managed care world can take many forms, including per diem, fee-for-service, MS-DRG-based, and capitation. Managed care organizations may use one or all of these payment approaches—in effect, a payment is negotiated and agreed to contractually on an individual basis between the managed care organization and the hospital.

The sidebar below presents a brief description of each type of payment.

Types of Payment

Per diem payment: Provides fixed daily payments that do not vary with the level of services used by the patient.

Fee-for-service payment: Reimburses the provider whatever fee the provider charges on completion of a specific service.

Case-based (MS-DRG) payment: Pays providers based on patients’ acuity levels.

Capitation: Pays providers a fixed amount for each person served (“enrollee” or “member”) regardless of the actual number or nature of services provided.

Managed care payers encourage per diem payment because it facilitates utilization review. The payer uses LOS standards for different cases to audit each patient situation. Per diem make it easier for MCOs to adjust claims, putting additional pressure on the hospital or health system’s ability to receive payment for care already provided. Some payers offer the healthcare organization a carrot. “Beat our LOS benchmark and we will split the savings.” The trend is clear: keep pushing for reduced length of stay.

Cost Management and Pay-for-Performance

Cost/services oversight has increased markedly in the last decade. A typical community hospital, for example, may treat many patients with a specific MS-DRG with a value of $10,000, as specified by Medicare. The hospital believes that the appropriate LOS (and the LOS it most often experiences) for that case is five days. When negotiating a per diem payment with a managed care payer, the hospital will try to obtain a per diem payment of no less than $2,000. However, MCOs frequently “insert their version” of LOS based upon their extensive research. Their objective is to pay only for what they believe to be the appropriate LOS, and perhaps that LOS is 3 days, rather than 5 days. MCOs are exerting constant downward pressure on LOS. Hospitals must react by changing systems and processes to minimize LOS.

In patient service areas where there are high material costs (for example, with prostheses and stents), per diem reimbursement does not cope adequately with the fact that the costs involved with such devices are “frontloaded”—i.e., incurred on the first day of the patient’s stay, or even before the patient is admitted. Hospitals may try to put some of the costs of certain procedures on what is known as a “carve out” basis. The total cost is divided into two parts: one part remains on a per diem basis; the other on a direct reimbursement for material.

In most surgical and medical situations, more than 50 percent of the costs of delivering patient care occur during the first two days of the patient’s stay. Accordingly, hospital negotiators may negotiate non-linear per diem reimbursement, in which more money is received for the first few days, and less money for the last few days of the patient’s stay. Hospitals are zealous in monitoring each case and providing oversight of patient days. The goal is to document the “medical necessity”
of each and every patient day. Hospitals use staff nurses and case managers to review the services prospectively, concurrently, or retrospectively to determine whether the services would be, are, or were medically necessary. When the contractual LOS approaches the limit, the case manager or nurse contacts the MCO to identify the necessity for additional days. Negotiations ensue to determine whether the MCO will pay the hospital for additional days.

More recently, both Medicare and commercial payers are shifting away from the utilization management approach, as just described, towards pay-for-performance. Pay-for-performance programs assume that the business case for quality improvement will be enhanced by a more close alignment of performance with financial rewards. Payers measure hospital performance against pre-determined metrics, and, in addition to negotiated or established base payment rates, distribute “bonuses” to “participants” based on performance relative to those metrics. Pay-for-performance programs are proliferating nationwide, using a wide variety of incentive approaches; analyses of data over a long period of time and best practices have not yet been conducted or identified.

Medicare and Medicaid Managed Care

Since 1990, the Medicare and Medicaid programs have encouraged beneficiaries to move from fee-for-service to managed care plans. Qualified MCOs negotiate a per capita payment per enrollee for both Medicare and Medicaid programs and agree to deliver medical services to enrollees as specified.

Medicare managed care plan enrollees increased steadily in the 1990s, declined between 2000 and 2003, but by 2008 overall enrollment was 19 percent of the 44.2 million individuals covered by Medicare (see Table 6). Coverage through a managed care plan may be less expensive for enrollees than fee-for-service plans and benefits may be broader.

States, which administer the Medicaid program, have chosen to rely on MCOs to deliver coverage to their Medicaid populations because MCOs have offered guaranteed access to comprehensive benefits at a predictable cost. Medicaid beneficiaries, who represented 15.2 percent of the U.S. population in 2007, often have less income than Medicare beneficiaries. They may have little, if any, “shopping discretion” and often must go with the program offered by their state. As a result, the number of Medicaid beneficiaries enrolled in some form of managed care program is growing rapidly, from 48 percent of enrollees in 1997 to 65 percent in 2006.13

Table 6. Enrollment in Medicare Managed Care Plans

<table>
<thead>
<tr>
<th>Year</th>
<th>Covered Population (millions)</th>
<th>Managed Care (millions)</th>
<th>Percentage Managed Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>34</td>
<td>1.3</td>
<td>4</td>
</tr>
<tr>
<td>1996</td>
<td>38</td>
<td>4.9</td>
<td>11</td>
</tr>
<tr>
<td>2003</td>
<td>41</td>
<td>4.6</td>
<td>11</td>
</tr>
<tr>
<td>2008</td>
<td>44.2</td>
<td>8.4</td>
<td>19</td>
</tr>
</tbody>
</table>

Source: Centers for Medicare & Medicaid Services, Office of the Actuary.

Accounting Challenges: Retrospective Review

When is revenue revenue? Recognizing revenue in the period it actually was earned—i.e., when the patient was treated—is a difficult process in hospital accounting, as described earlier in this publication. Medicare and Medicaid’s right to review, challenge, and adjust the rates a hospital has charged in a previous period (a specific year) increases the complexity of the accounting challenge.

Medicare and Medicaid’s retrospective review process can be described as follows:

- Reimbursement rates for concluded patient activity can be reevaluated in the future.
- The amounts involved in the reevaluation are often material and can significantly affect the organization’s prior reporting period results. With a few exceptions, however, outside auditors will not change prior-period accounting statements, and the penalty will appear in the year in which it is levied.
- The period reviewed by Medicare and Medicaid frequently includes several years. In a recent example, Medicare changed a hospital’s rates for five prior years—four years later. This means, for example, that Medicare can change a hospital’s rates for the 2000 to 2005 period in 2009.
- These after-the-fact changes affect both accrual and cash results, but the effect on cash may not coincide with the accrual effect.

Medicare and Medicaid use financial intermediaries (FIs) to conduct audits. These audits can lead to claims against (or less frequently, payments to) hospitals and health systems. Medicare frequently uses Blue Cross as an FI.

Audits and Final Settlements

Hospitals and health systems are required by Medicare and Medicaid to submit a cost report by June 30 of each year for the previous year ending December 31. The cost report is voluminous, containing a large amount of financial and quantitative data collected and presented by the organization.

Following an analysis of this cost report, Medicare or Medicaid’s FI conducts its first type of investigation or audit—a base rate audit. As mentioned earlier, the FI can challenge the base rate used by the hospital in the preceding year (a discussion of base rate appears on page 8), up to four years later. To exacerbate the situation, once a final settlement is reached, the FI can reopen the case beyond the four-year

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11 Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group.
period. Also, up to two years after patient discharge, healthcare organizations can appeal base rates on specific cases. Appeals can delay the FI’s audit investigation. When this investigation has concluded, “final settlement” has been reached.

The second investigative process conducted by the FI involves an examination of medical records held by the organization. Investigatory situations, which can be extensive, fall into two broad categories: the coding of cases and documentation. Both can be challenged. The FI may indicate that the assignment of MS-DRGs was faulty or that documentation was deficient and does not justify the reimbursement claimed and obtained. Through examination of medical records, the FI can indicate, for example, that procedures performed and reimbursed were not in fact performed, or that physicians claimed by the healthcare organization to be present at a procedure were not in fact present.

In this “contest” between the payer and healthcare organization, Medicare and Medicaid FIs are trying to minimize payment and healthcare organizations are trying to maximize payments. Both parties are operating within the constraints of a contractual and regulatory framework. When do healthcare organizations know an audit will occur? Generally, when the FI calls them and informs them of such.

If an audit results in an adverse rate revision for the healthcare organization, the accounting effects can be significant. Because the organization overstated revenue in a prior year, it must refund the payer the difference between the amount the hospital was reimbursed and the new rate. The organization can make the payment in one of two ways: it can adjust current rates, and get paid less for cases performed now, or make a cash payment.

How do organizations present this “correction” on financial statements? External auditors have strong convictions about adjusting prior-period results to reflect required revisions. They hold that the healthcare organization should estimate these changes in the appropriate period, thereby enabling the establishment of reserves so that the rate change would be recorded at the proper time. External auditors further believe that the failure to set up the reserve, or establish a reserve in the right amount, should be reflected in the period in which corrections are made.

Healthcare organizations cannot do anything about prohibition of prior-period adjustments. However, many organizations do not wish to include adjustments in the portion of the financial statement that is focused on current period operating revenue. Thus, organizations often show the rate change as an “unusual item.”

**Final Thoughts on Reimbursement**

The hospital payment environment is constantly changing, making it difficult to generalize at this time about the types of contractual arrangements that will yield the best financial results for hospitals. Accounting challenges associated with contract types and required payer adjustments abound. The time-honored accounting objective of matching revenues and expenses is becoming increasingly difficult.
Developing the Budget and Monitoring Financial Performance

Budgeting

How do directors monitor hospital performance as the year progresses? The principal and essential tool is the budget, which is a revenue and expense forecast describing a hospital’s financial goals for the forthcoming year. The estimates for each account or line item reflect what management wants and expects to achieve in the upcoming year.

The budget is presented as a set of values on the Statement of Operations and Changes in Net Assets (see page 18). A variance column provides the difference between actual results by category and the budget for the category. These variances are available for analysis whenever the board reviews financial information.

Is budgeting planning? It is. However, the terms long-range planning, financial planning, and strategic planning usually mean something else. A budget has a one-year time horizon. It reflects objectives that are achievable in the short-term. Long-range plans have longer time horizons—three to five years, and perhaps longer. They reflect future plans and goals. For example, a long-range plan might include the addition of a major new service three years from now or a new facility for which construction will begin five years from now.

How are the budgeting and planning processes connected? The current budget is a step toward the fulfillment of the long-range plan. However, the cumulative effect of five budgets does not equate to a five-year strategic plan. Why not? Frequent changes experienced over a five-year period, including assumptions, circumstances, and short-run results, alter the cumulative effect.

All hospitals prepare budgets, but some hospitals do not prepare formal long-range plans. This represents a significant problem. Organizations should have an ongoing planning process that results in a written, data-based plan, which identifies where the organization wants to be in the future and how it plans to get there. According to the capital markets, the preparation of long-range financial plans is an increasingly important core competency for healthcare executives.

Given the availability of easy-to-use contemporary software tools, the integration of strategic and financial plans is both practical and desirable. So too is the integration of the annual budget with the strategic, capital, and financial plans. Strategic planning, which frequently still is a separate planning process, can and should now be integrated with long-range plans and annual budgets, whether as one integrated plan or a strategic plan tied to a financial and capital plan.

With an integrated approach to financial management, the specific targets of the financial plan are used to “drive” initial budget development, in effect, rolling the financial plan down through the organization.

Initiatives in the longer-range financial plan may produce results in the current budget year, and thus are reflected in the current budget.

Preparing the Budget

In today’s environment, completing the budget in a timely manner is often difficult. Uncertainty about payment arrangements and rates may delay the process. Budgeting requires attention from budget professionals and, due to its grass-roots nature, considerable time and attention from staff at all levels. A budget cannot be imposed arbitrarily on individuals who must operate within its constraints. Department heads must participate in budget development and implementation. In short, budgeting is complex, and often either does not get the time it deserves or consumes a very large amount of staff time. Submitting an annual budget in a timely manner is critical. Exhibit 9 illustrates the budgeting process.

Exhibit 9. The Budgeting Process

<table>
<thead>
<tr>
<th>The Steps</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top management provides guidelines, assumptions, and constraints (such as discharge goals, number of FTEs, payer mix)</td>
<td>Starts about six months before year end</td>
</tr>
<tr>
<td>Departmental management aided by staff produces department budgets</td>
<td></td>
</tr>
<tr>
<td>Individual budgets are aggregated (when the pieces are added together, total costs probably exceed an acceptable level)</td>
<td></td>
</tr>
<tr>
<td>Further negotiation</td>
<td></td>
</tr>
<tr>
<td>Completed budget</td>
<td></td>
</tr>
<tr>
<td>Board approval</td>
<td>Hopefully, two months before the new year</td>
</tr>
</tbody>
</table>

Note: “FTEs” = full-time equivalents
Source: Kaufman, Hall & Associates, Inc.

Flexible Budgeting

Flexible budgeting is a process than can be used on a monthly basis to more effectively measure budget-to-actual variances. The flexible budget answers the question, “If we had budgeted volumes perfectly, what variances would be left?” Flexible budgeting involves creating a budget in which the budgeted rate per unit is multiplied by the actual volume.

Many hospital line items or expense categories depend upon the level of activity. For example, the number of meals served depends upon patient days; surgical supplies depend upon the number and type of surgeries.

14 For more information on this topic, see the white papers available on Kaufman Hall’s Web site: www.kaufmanhall.com.
To develop accurate budgets using currently available budgeting software, organizations set the expected level of activity for a particular department based upon their best estimates as to what the level of activity will be on a month-by-month basis. The actual activity level and hence expense are unlikely to ever be exactly the same as the estimate. “Flexible budgeting” deals properly with this condition. Using a computer-driven formula, the budget varies based on the level of activity for the reported period. Software is essential for such budgeting and volume-adjusted variance reporting.

A major part of the budget represents the compilation of departmental data provided by department managers or directors. Departmental managers must have the opportunity on a regular basis to review their departments’ performance. They assume responsibility for the results, and through a comparison of actual values to budgeted values, can best explain why a variance may be present. Flexible budgeting ensures that the managers see results that reflect the actual level of department activity for each expense item.

Altering the Budget
Numerous changes in a hospital’s operating environment may appear to require a budget adjustment. However, budgets generally are changed only when significant changes occur early in the budget year. Thereafter, financial management must advise the board, as necessary, that budgeted results will not be achieved, and use the interpretation of variances to highlight the changes.

Variance Analysis
The use of a budget allows a variance to be noted in a revenue and expense statement. The analysis of a variance, using certain techniques, provides the basis for a penetrating explanation of the difference between what was budgeted and what actually occurred.

Variance analysis quantifies the differences between actual and budgeted values for a resource, revenue, or service. Revenue variances usually involve the largest dollar amounts and deserve the greatest attention. Board members and physician leaders do not need to learn how to perform variance analysis. Rather, they need to know that this process can provide answers to questions that arise when results are monitored against budget.

**Capital Budgets**

Capital expenditures require separate consideration through a capital budgeting process. Capital expenditures are outlays, frequently large, that provide benefits for more than the year in which they were incurred—frequently for many years. Two major examples are facilities (new buildings, additions to existing buildings, and facility improvements) and equipment (for example, new imaging technology).

Capital expenditures are depreciated over their estimated useful life. However, capital expenditures also incur ongoing costs, such as labor, supplies, and maintenance, which must be included in the organization’s annual budget.

In previous decades, capital expenditures were reimbursed by payers as a pass-through. This was a “can’t-lose situation” that often provided an excuse for not doing capital budgeting. That honeymoon is over. The failure to prepare and maintain a capital budget can be extremely hazardous. The board may find it more challenging to provide oversight for the capital budget, but oversight is critical.

**Justifying Capital Expenditures**

Decisions about capital expenditures made on an ad hoc or political basis in response to internal pressures or power centers are unlikely to be in the organization’s best financial interests. Depreciation charges and required cash flow may not have been taken into account with decisions made on this basis. In such instances, working capital often is used to meet the need—the working capital required for day-to-day operations.

Most capital projects should increase revenues and/or reduce costs. For example, a new outpatient clinic or diagnostic testing facility should bring new revenue to the organization. The operating impact of approved capital projects should be included in the annual operating budget. Capital requests above a certain dollar figure, as defined by the organization, require analysis through accepted methodologies, such as net present value (NPV) analysis and expected net present value (which adjusts the NPV based on possible risks). Organizations need staff with the skills to make forecasts and prepare simulations; executives need to know how to judge the worthiness of proposed projects.

Long-range planning focuses management’s attention on capital budgeting. Organizations with a long-range plan have a more thorough understanding of the capital outlays required to meet long-term goals. On big-ticket capital items, board members should be assured that appropriate staff and executive work has been completed.
Using the Monthly Financial Package to Monitor Performance

Package Overview

The hospital should distribute a package of financial information to board members on a monthly basis. Although other financial materials are circulated to directors from time to time, the monthly package is critical to keeping board members up to date about the hospital’s financial condition. An abridged version of the information received by the management team, the trustee package does not include underlying detail, such as data related to the performance of different units and services.

Account structures and the way data are organized differ by hospital. The financial material in the trustee package should include, at a minimum, the following:

- A Balance Sheet, also known as a Statement of Financial Position, as of the last day of the reported month
- A Statement of Operations and Changes in Net Assets, previously known as the Statement of Revenue and Expense, for the month and year-to-date
- A Statement of Cash Flows, also known as a Statement of Sources and Uses of Cash, for the year-to-date
- A Statistical Report that reflects levels of patient activity and supports analysis of financial and operational performance

To facilitate an understanding of the reports, let’s assume that readers are board members attending a regular meeting of the board finance committee, either as an observer or as a committee member. As its principal task, the committee regularly monitors the hospital’s performance. The sidebar below presents some of the monitoring challenges.

Both the financial presentation, which is always an important agenda item at board meetings, and “the flavor” of what typically occurs at such meetings are described here. Board finance committee agendas generally are wide-ranging, but the purpose of the financial presentation is to focus on the portion that addresses the question, “How are we doing?” Report contents are examined and information is provided on how hospitals are performing.

As mentioned earlier, the reports included here do not reflect actual data from a hospital. They are streamlined, and in some instances, the linkage between reports is not made. However, these “shortcuts” do not diminish the value of the reports for the analysis described. In addition, in the interest of simplification, the reports assume only one line of service and one payer (perhaps Medicare), although all hospitals have multiple service lines and payers. Readers can assume that the analytical techniques used here can simply be repeated with multiple service lines or payers.

Monitoring Challenges

Monitoring a hospital’s performance on a frequent basis is one of the key and most important tasks performed by the finance committee of the board of directors. Challenges involved in such monitoring include the following:

1. Budgeting, which provides information to facilitate the review of financial reports, is a difficult process requiring extensive estimating.
2. Trends may not be visible in single monthly reports, but generally can be identified as additional months are added to the year-to-date figures.
3. Significant financial changes that emerge after the budget is finalized complicate the monitoring of financial performance.
4. Auditors may make end-of-the-year adjustments that significantly affect the financial reports.

The “what happened” discussion at board finance committee meetings as described here does not assume that board members are versed in the methodologies used to conduct the analyses. However, the discussion does assume that board members understand the nature of the methodologies and can follow a discussion of how the various analyses are conducted. The chief financial officer and the finance staff provide the presentation. Board members are more than listeners, but not implementers.
### Statement of Operations

<table>
<thead>
<tr>
<th>Statement of Operations</th>
<th>Month</th>
<th>Year to Date</th>
<th>Prior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Budget</td>
<td>Variance</td>
</tr>
<tr>
<td><strong>Patient Revenues</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inpatient</td>
<td>$9,691</td>
<td>$10,266</td>
<td>($575)</td>
</tr>
<tr>
<td>Ambulatory Surgery</td>
<td>1,444</td>
<td>1,506</td>
<td>(62)</td>
</tr>
<tr>
<td>Clinic</td>
<td>1,085</td>
<td>1,290</td>
<td>(205)</td>
</tr>
<tr>
<td>Private Ambulatory</td>
<td>552</td>
<td>566</td>
<td>(14)</td>
</tr>
<tr>
<td><strong>Total Patient Revenues</strong></td>
<td>12,772</td>
<td>13,628</td>
<td>(856)</td>
</tr>
<tr>
<td><strong>Other Revenues</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Revenues</td>
<td>2,659</td>
<td>2,868</td>
<td>(209)</td>
</tr>
<tr>
<td>Investment Income</td>
<td>161</td>
<td>52</td>
<td>109</td>
</tr>
<tr>
<td><strong>Net Assets Released</strong></td>
<td>252</td>
<td>107</td>
<td>145</td>
</tr>
<tr>
<td>Contributions</td>
<td>39</td>
<td>86</td>
<td>(47)</td>
</tr>
<tr>
<td><strong>Total Revenues</strong></td>
<td>15,883</td>
<td>16,741</td>
<td>(858)</td>
</tr>
<tr>
<td><strong>Operating Expenses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries and Wages</td>
<td>7,317</td>
<td>7,408</td>
<td>91</td>
</tr>
<tr>
<td>Employee Benefits</td>
<td>1,723</td>
<td>1,748</td>
<td>25</td>
</tr>
<tr>
<td>Supplies</td>
<td>3,809</td>
<td>3,677</td>
<td>(132)</td>
</tr>
<tr>
<td>Purchased Services</td>
<td>1,016</td>
<td>981</td>
<td>(35)</td>
</tr>
<tr>
<td>Medical Fees</td>
<td>254</td>
<td>245</td>
<td>(9)</td>
</tr>
<tr>
<td>Energy</td>
<td>285</td>
<td>392</td>
<td>107</td>
</tr>
<tr>
<td>Insurance</td>
<td>538</td>
<td>565</td>
<td>27</td>
</tr>
<tr>
<td>Interest</td>
<td>258</td>
<td>267</td>
<td>9</td>
</tr>
<tr>
<td>Depreciation and Amortization</td>
<td>486</td>
<td>487</td>
<td>1</td>
</tr>
<tr>
<td>Provision for Bad Debt</td>
<td>554</td>
<td>566</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total Operating Expenses</strong></td>
<td>16,240</td>
<td>16,336</td>
<td>96</td>
</tr>
<tr>
<td><strong>Surplus (deficit) from Operations</strong></td>
<td>(357)</td>
<td>405</td>
<td>(762)</td>
</tr>
</tbody>
</table>

### Definitions of Selected Line Items

- **Other Revenue**: Revenue resulting from such activities as cafeteria sales and parking garage fees.
- **Medical Fees**: Payments to physicians for a variety of contractual services.
- **Purchased Services**: Includes a wide variety of outlays, such as the cost of agency nurses, fees for legal, accounting, and consulting services, and collection expenses.
- **Supplies**: A major item covering medical and non-medical supplies.
- **Investment income**: Auditors have promulgated some changes to the reporting of investment income. Realized gains and losses appear in the operations section. Unrealized gains and losses appear in the "changes in net assets" section.
Statement of Operations and Changes in Net Assets

The Financial Accounting Standards Board (FASB) recently changed the title of this report to the Statement of Operations and Changes in Net Assets, or in shortened form, “Statement of Operations.” This report uses the words surplus and deficit in order to move away from associating profits and losses with a not-for-profit organization.

The Statement of Operations has two parts. The line items above the Surplus (Deficit) from Operations line are specific to the task of taking care of patients. Patient activity is defined broadly, however, and Operating Revenues and Operating Expenses can include small items, such as revenue generated from parking lot fees, and very significant items such as salaries. The focus in this description is on the line items appearing before Surplus (Deficit) from Operations. In the not too distant past, the items appearing beneath this line did not appear on the Statement of Operations.

Although not reflected in this sample report, hospitals often wish to report “unusual” or “extraordinary” events on the Statement of Operations right above the Surplus (Deficit) from Operations line. However, external accountants do not favor this treatment and would prefer the reporting to occur in the appropriate category (either Operating Revenues or Operating Expenses).

The committee’s analysis: During the board finance committee meeting, the central question to be answered is, “How did the hospital do since the committee last met?” The Statement of Operations provides results for the current month and year-to-date. Should committee members focus on the former, the latter, or both? Generally, an analysis of year-to-date results suffices, and hence is described here. All of the calculations are based on information in the reports provided here.

The analysis starts by observing what happened year-to-date on the line labeled “Surplus (Deficit) from Operations.” There is a negative variance of $1,499M. The variance is the difference between the actual and the budgeted amount. Notice, however, that the hospital did not lose money, but has a surplus of $853M. Nonetheless, negative variances are a matter of concern and committee members will want to determine the likely cause(s).

Variance analysis enables the committee to probe for root cause(s). Revenue variances usually involve the largest dollar amounts and deserve the greatest attention. The most likely culprit is the Inpatient line under Operating Revenues, where there is a negative variance of $1,209M. What is the likely cause? Because inpatient revenue reflects the number (i.e., volume) of discharges experienced by the hospital and the payments received for these discharges, the committee will want to look closely at these data, which appear in the Statistical Report below.

<table>
<thead>
<tr>
<th>Statistical Report</th>
<th>Month</th>
<th>Year to Date</th>
<th>Prior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Budget</td>
<td>Variance</td>
</tr>
<tr>
<td>Inpatient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharges</td>
<td>599</td>
<td>615</td>
<td>(16)</td>
</tr>
<tr>
<td>Average Length of Stay</td>
<td>4.72</td>
<td>5.22</td>
<td>(0.50)</td>
</tr>
<tr>
<td>Case Mix Index</td>
<td>1.99</td>
<td>1.98</td>
<td>0.01</td>
</tr>
<tr>
<td>Average Daily Census</td>
<td>130</td>
<td>135</td>
<td>(5)</td>
</tr>
<tr>
<td>Outpatient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinic Visits</td>
<td>6,354</td>
<td>7,644</td>
<td>(1,290)</td>
</tr>
<tr>
<td>Ambulatory Surgery</td>
<td>713</td>
<td>756</td>
<td>(43)</td>
</tr>
<tr>
<td>Private Ambulatory</td>
<td>9,609</td>
<td>10,279</td>
<td>(670)</td>
</tr>
<tr>
<td>Emergency Room</td>
<td>1,542</td>
<td>1,718</td>
<td>(176)</td>
</tr>
</tbody>
</table>

15 A private organization administered by the Certified Public Accounting profession, FASB has the mission of establishing and improving standards of financial accounting and reporting in the United States. Although its promulgations do not have the force of law, the standards are supported by the SEC and observed in practice.  

16 “M” represents sums in thousands (000s).
The first review considers the financial effects of lower-than-expected volume—a shortfall in discharges.

\[
\text{Revenue loss} = \text{Discharge shortfall (excess)} \times \text{Average value of a discharge}
\]

or

\[
$1,300M = 130 \times $10,000
\]

This might appear to almost completely explain the negative $1,499M variance on the Surplus (Deficit) from Operations line. Stopping the analysis at this point, however, would likely ignore a number of other important variances, which could offset each other and therefore should be explored.

Price variances (also referred to as rate variances) can result from a number of factors. A rate variance may be caused by changes in case mix intensity (CMI). If the hospital budgeted a specific acuity for its discharges, and the actual acuity is greater, the hospital will be paid more than it had anticipated, resulting in a positive variance. The opposite situation could occur as well. Does our example hospital have a case mix variance?

\[
\text{Dollar value of case mix variance} = \text{Gain (loss) per case} \times \text{Total discharges}
\]

or

\[
$297.4M = 50 \times 5,948
\]

The $50 sum is derived as follows: Statistical Report data indicate that the hospital budgeted a weighted average case mix of 2.0, which reflects the average of all anticipated MS-DRGs and their respective weights. The year-to-date actual case mix is 2.01. The favorable variance of .01 can be monetized. Table 5 indicates that our hospital has a base rate of $5,000 for a MS-DRG of 1.0. Thus, a positive variance of .01 has a value of $50.

The other price variance is payer mix. The hospital may not be achieving the proportion of revenue expected from one or more of its many payers. Payers most often have different rates for a given service. If two payers, for example, are each expected to provide half of the cases, but in fact one payer accounts for 60 percent of the cases, the actual year-to-date weighted average rate will not be what the hospital budgeted. This creates a payer mix variance.

There could be additional reasons for revenue variance, for example, payer denials and negative prior period settlements.

The volume variance (-$1,300M) plus the case mix variance (+$297.4M) accounts for $1,002.6M of the total negative variance of $1,209M on the Inpatient revenue line. The variance due to payer mix, the difference between these numbers, amounts to $206.4M.

Based on the variance analysis, the board members might ask senior management about the following:

1. Discharge shortfall: Why did it occur and will it continue? What steps can be taken to improve the discharge rate?
2. Payer case mix: Can the higher intensity be sustained, or is it a transient condition?

The committee reviews the Operating Expenses section of the Statement of Operations and identifies the largest positive and negative variances. Committee members note that Salaries and Wages show an unfavorable variance. With lower-than-expected discharges, shouldn’t salaries and wages also be lower than expected, rather than higher? For a number of reasons, salaries and wages are not purely a variable cost, meaning they do not rise or fall proportionately with patient volume.

Review of non-patient care-related revenue, which includes Other Revenue, Investment Income, Net Assets Released, and Contributions, follows. In this instance, these revenues aggregate to a positive variance of $239M. Although the aggregate number looks good, the committee might wish to review and discuss individual line items.

In today’s climate, some claims for payment are always being negotiated. This increases the need for organizations to maintain adequate reserves in order to state revenues realistically. A reserve is created by an accounting adjustment, one side of which is an estimated liability for claims losses. The other side is an expense. Organizations assume...
some loss of revenue arising out of contested charges, and do this by estimating claim losses. Periodically, the reserve must be adjusted to actual experience.

As the year progresses, finance committee members are likely to be increasingly interested in what the numbers will look like at the end of the year. The management’s financial team can prepare a projection that takes the most current year-to-date actuals and adds a forecast for the remaining months. That forecast is essentially the budget for the remainder of the year, subject to significant changes to the values originally used in the budget. For example, perhaps the hospital expects a significant variance in inpatient discharges for the remainder of the year.

Balance Sheet
The Balance Sheet provides a snapshot of the organization’s resources (assets), liabilities, and resulting net worth at one point in time. As its name implies, the Balance Sheet is based upon the following equation:

\[
\text{Assets} = \text{Liabilities} + \text{Net worth (called net assets in not-for-profit world)}
\]

Assets are the resources needed to conduct a business or run an organization. Liabilities are the claims or the interest in those assets represented by creditors who provide the wherewithal to acquire assets.

Net assets: The concept of net worth applies in the for-profit world and is the dollar value of a company’s asset position which belongs to the stockholders. Until recently, the equivalent concept in the not-for-profit sector, where there are no stockholders, was fund balances, but the accounting profession is now calling these net assets. Net assets are the difference between assets and liabilities.

The Balance Sheet includes line items for three categories of net assets:

1. **Permanently Restricted**: These assets, such as an endowment, can be used only in accordance with the restrictions stipulated by those providing the asset.

2. **Temporarily Restricted**: These assets have restrictions with an expiration date, and/or become unrestricted when certain conditions are met.

3. **Unrestricted**: These assets are what is left over after balancing the above-mentioned equation.

When the Balance Sheet is reviewed, the emphasis is on line items that have changed significantly between the previous year-end Balance Sheet and the current-month Balance Sheet. When significant differences are apparent, committee members focus on why those changes occurred. Most often, the Balance Sheets of two consecutive months will not display significant changes.

Statement of Cash Flows
As its name implies, the Statement of Cash Flows tracks an organization’s flow of cash and provides a detailed look at the organization’s sources and uses of cash during a specified period of time. Typically the report provides data for the current year and previous year in two separate columns in order to enable review of what changed.

The finance committee reviews items that may have changed significantly. Prominent possibilities include Accounts Receivable; Accounts Payable; Property, Plant, and Equipment; and Cash.

Accounts Receivable reflects the amount owed to the organization for the services provided to patients. A growth in this asset can indicate both good and bad trends. A good trend is that the organization’s total revenues are increasing and the Accounts Receivable is increasing proportionately. A bad trend is that the organization may not be collecting its payments due (cash) in a timely manner.

The Statement of Cash Flows indicates that the hospital has *decreased* Accounts Receivable. The hospital therefore has increased cash by $4,788M. Accounts Receivable may be decreasing because revenue is shrinking, however, this appears not to be the case. Another possibility is that the Accounts Receivable collection system has improved, thereby reducing payments yet to be received.

Given unrelenting financial pressure on organizations, committee members should be alert to the rate at which Accounts Receivable are collected and evaluate whether the current rate is at the “right level.” A ratio widely used in the healthcare and other industries is helpful in getting a feel for how the organization is performing in this area:

\[
\text{Days in A/R} = \frac{\text{Accounts receivable (net)}}{\text{Patient revenue per day}}
\]

\[
\text{or } \quad \frac{28,888M}{126,982M ÷ 274} = 62
\]

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cash Flows from Operating Activities</strong></td>
<td>$1,029</td>
<td>$192</td>
</tr>
<tr>
<td>Change in Net Assets</td>
<td>131</td>
<td>449</td>
</tr>
<tr>
<td>Unrealized Gains and Losses on Investments</td>
<td>4,788</td>
<td>2,817</td>
</tr>
<tr>
<td>Accounts Payable and Accrued Expenses</td>
<td>1,143</td>
<td>4,945</td>
</tr>
<tr>
<td>Other Operating Liabilities</td>
<td>74</td>
<td>1,755</td>
</tr>
<tr>
<td>Other Operating Assets</td>
<td>300</td>
<td>977</td>
</tr>
<tr>
<td><strong>Net Cash Provided by Operating Activities</strong></td>
<td>2,710</td>
<td>5,363</td>
</tr>
<tr>
<td><strong>Cash Flows from Investing Activities</strong></td>
<td>($4,343)</td>
<td>($8,553)</td>
</tr>
<tr>
<td>Changes in Marketable Securities</td>
<td>1,666</td>
<td>942</td>
</tr>
<tr>
<td><strong>Net Cash Used in Investing Activities</strong></td>
<td>($2,677)</td>
<td>($7,611)</td>
</tr>
<tr>
<td><strong>Cash Flows from Financing Activities</strong></td>
<td>($1,250)</td>
<td>($1,218)</td>
</tr>
<tr>
<td>Principal Payments on Long-Term Debt</td>
<td>3,166</td>
<td>3,166</td>
</tr>
<tr>
<td><strong>Net Cash Used in Financing Activities</strong></td>
<td>($1,916)</td>
<td>($1,410)</td>
</tr>
<tr>
<td><strong>Increase (decrease) in Cash</strong></td>
<td>$1,949</td>
<td>($3,658)</td>
</tr>
<tr>
<td><strong>Cash at Beginning of Year</strong></td>
<td>$3,363</td>
<td>$7,021</td>
</tr>
<tr>
<td><strong>Cash at End of Year</strong></td>
<td>$5,312</td>
<td>$3,363</td>
</tr>
</tbody>
</table>

Felix Kaufman, Ph.D., CPA
Two hundred seventy-four (274) is the number of days year-to-date in the typical nine-month period.

The board should compare the hospital’s Accounts Receivable Days results to industry benchmarks, which are compiled annually and available from the major rating agencies (Moody’s Investors Services, Standard & Poor’s, and Fitch Ratings).

Accounts Payable is the amount the hospital owes to vendors. The Statement of Cash Flows indicates that the hospital has reduced its accounts payable, thereby reducing its cash by a material $8,258M. Why might this have occurred? Did the hospital accelerate payments to its suppliers in order to bring accounts payable down to a satisfactory level? Perhaps payment delays were creating credit holds, which the organization could overcome only through an infusion of cash and paying vendors quicker.

What is an acceptable level for Accounts Payable? Again, using a ratio to identify the hospital’s accounts payable position and comparing results to industry benchmarks are important and helpful. We calculate “Days in Accounts Payable” as follows:

\[
\text{Days in A/P} = \frac{\text{Accounts payable}}{\text{Average daily expense}}
\]

or

\[
98 = \frac{21,018M}{214M}
\]

The result for our hospital is an average payment period of 98 days, which is somewhat higher than standard in the industry.

When hospitals are slow to pay their vendors, hospitals will not be able to take advantage of discounts. Vendors will also set higher prices to offset the problem of slow payment. If total Accounts Payable is trending upward and cash is remaining stable, the hospital is gaining working capital by borrowing from its vendors and suppliers. Terms most likely may not be favorable to the hospital.

Property, Plant, and Equipment is reviewed if the change is consequential. The Statement of Cash Flows indicates decreased cash of $4,103M from “Net Acquisitions of Property, Plant, and Equipment.” The hospital spent this amount to fund needed purchases or improvements for property, plant, and equipment.

To investigate the appropriateness of the spending level, management needs information about the capital budget. The hospital’s depreciation expense of $4,103M is not appreciably different than the level of capital spending. However, capital needs almost always exceed the depreciation level. Financing is needed, but the organization may not be able to obtain such financing. The temptation is use cash from working capital to fund additional spending for property, plant and equipment. This can have a deleterious effect on needed liquidity and an organization’s future ability to borrow to fund identified strategic growth opportunities.

To review the hospital’s cash position, the committee first identifies how much money is “in the checking account” by looking at the bottom line of the Statement of Cash Flows or the top line of the Balance Sheet. The sums should be the same. For our hospital, the figure is $5,312M. Next, in order to appraise the total amount of available cash, board members should add to this sum other accounts that are cash equivalents, notably marketable securities. The committee should evaluate whether this cash position is sufficient to support current operations.

“Days Cash on Hand” is the most common ratio used to assess liquidity. It measures the number of days of cash operating expenses an organization could support if its revenue stream were to be reduced or eliminated. Bond rating agencies review this closely—they like to see it exceeding certain levels when the organization has outstanding long-term debt or is planning to acquire new debt. There are accounts that may or may not qualify for the Days Cash on Hand calculation. A good example is “Certain Assets Limited as to Use,” the categories and classifications of which vary widely. In many instances, this account would not qualify. It has been included in this calculation.

We calculate Days Cash on Hand as follows:

\[
\text{Days Cash on Hand} = \frac{\text{Cash + Marketable securities + Certain assets limited as use}}{\text{Average daily expense}}
\]

or

\[
28 = \frac{5,312M + 4,654M + 5,216M}{545M}
\]

Days of cash vary significantly by region, but this organization’s Days Cash on Hand is three or four times lower than national averages.

Note that the hospital’s Balance Sheet includes Marketable Securities under Current Assets and under other non-current assets. Committee members will also observe that the value of the non-current asset ($6,599M) is precisely equal to the value of Permanently Restricted net assets. This is not an accident. The hospital has endowments involving donations that can only be spent for specific purposes. This sum cannot be included in the calculation of Days Cash on Hand.

Analysis of other ratios can give Finance Committee members insight into the hospital’s profitability, liquidity, leverage, and physical plant. Key ratios include operating margin, excess margin, operating EBIDA margin, cash-to-debt ratio, cushion ratio, debt service coverage ratio,

17 Average daily expense (for expenses from vendor activity) = \((\text{Total operating expense - Salaries and wages - Employee benefits - Depreciation - Interest - Bad debt}) ÷ 274\). Or, \(214M = (153,585M - 66,068M - 17,069M - 4,103M - 2,328M - 5,349M) ÷ 274\).

18 Average daily expense (for expenses involving use of cash) = \((\text{Total operating expense - Depreciation}) ÷ 274\). Or \(545M = (153,585M - 4,103M) ÷ 274\).
deb字体 burden ratio, debt-to-capitalization ratio, debt-to-cash flow ratio, and average age of plant ratio.

Hospitals are buffeted by a variety of forces, including unfavorable reimbursement adjustments and increasing costs. Notwithstanding, sound financial management is imperative. The alternative—operating in the perpetually tense world of subsistence cash levels—is difficult, at best.

Using Credit and Ratio Analysis to Monitor Performance

Dozens of factors are relevant to financial performance; the challenge for an organization’s board and management team is to select those most indicative of the organization’s financial strengths and weaknesses and closely monitor these on a regular basis.

Ratio Analysis

A ratio compares quantities relative to each other; for example, the amount of cash an organization has in dollars compared to the amount of debt outstanding in dollars. Ratio analysis is a process used to conduct a quantitative analysis of the information in an organization’s financial statements. Ratios are calculated from current year numbers and are then compared to previous years, other organizations, or the industry to judge the performance of the hospital.

Financial ratios can be used to identify organizational trends and comparative performance.

The sidebar below lists the key measures used in many effective financial analyses and Table 7 defines their associated ratios. Financial statements provide the data required for ratio calculation.

Key Indicators Used in Many Effective Financial Analyses

Profitability Indicators
- Operating margin reflects the profitability of an organization from its active patient care and related operations.
- Excess margin reflects profitability from operations and includes revenue and expense from non-operating activities such as investment earnings and philanthropy.
- Operating earnings before interest, depreciation, and amortization (EBIDA) margin provides a good look at an organization’s ability to generate enough cash to meet interest and principal payments on debt.

Liquidity Indicators
- Days cash on hand, probably the most important credit ratio in use today, reflects the number of days of cash set aside by the organization to support operating expenses if the revenue stream were to be reduced or eliminated.
- Cash-to-debt ratio measures the availability of an organization’s liquidity to pay off existing debt.
- Cushion ratio compares the organization’s free cash to its annual debt service—higher numbers are better than lower ones.

Debt Indicators
- Debt-service coverage ratio measures the ability of an organization’s cash flow to meet its debt-service requirements.
- Debt-to-capitalization ratio indicates how highly leveraged, or debt financed, the organization is—the higher the capitalization ratio, the higher the risk.

Other Indicators
- Average age of plant provides a relative measure of the age of the physical facilities and provides insight into the organization’s future capital needs.
- Capital spending ratio, a relatively new metric, assesses capital spending as a percentage of EBIDA.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Financial Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating margin</td>
<td>Total operating revenue – Operating expenses</td>
</tr>
<tr>
<td></td>
<td>Total operating revenue</td>
</tr>
<tr>
<td>Excess margin</td>
<td>Income from operations + Non-operating revenue</td>
</tr>
<tr>
<td></td>
<td>Total operating + Non-operating revenue</td>
</tr>
<tr>
<td>Operating EBIDA margin</td>
<td>Operating income + Interest + Depreciation + Amortization</td>
</tr>
<tr>
<td></td>
<td>Total operating revenue</td>
</tr>
<tr>
<td>Days cash on hand</td>
<td>Cash + Marketable securities + Board-designated funds × 365</td>
</tr>
<tr>
<td></td>
<td>Total operating expenses – Depreciation – Amortization</td>
</tr>
<tr>
<td>Cash-to-debt ratio</td>
<td>Cash + Marketable securities + Board-designated funds</td>
</tr>
<tr>
<td></td>
<td>Long-term debt + Short-term debt</td>
</tr>
</tbody>
</table>

Table 7. Key Creditworthiness Ratios

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Financial Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cushion ratio</td>
<td>Cash + Marketable securities + Board-designated funds</td>
</tr>
<tr>
<td></td>
<td>Maximum annual debt service</td>
</tr>
<tr>
<td>Debt-service coverage ratio</td>
<td>Excess revenue over expenses + Depreciation + Interest + Amortization</td>
</tr>
<tr>
<td></td>
<td>Annual debt service</td>
</tr>
<tr>
<td>Debt-to-capitalization ratio</td>
<td>Long-term debt (less current portion) + Unrestricted net assets</td>
</tr>
<tr>
<td>Average age of plant</td>
<td>Accumulated depreciation</td>
</tr>
<tr>
<td></td>
<td>Annual depreciation</td>
</tr>
<tr>
<td>Capital spending ratio</td>
<td>Capital expenditures (additions to property, plant, and equipment)</td>
</tr>
<tr>
<td></td>
<td>Depreciation expense</td>
</tr>
</tbody>
</table>
Credit Analysis
An excellent way for boards and executives to understand a hospital or health system’s current financial position is to conduct a financial credit analysis. This essentially allows them to compare the organization’s recent financial performance to relevant national standards that serve as a benchmark.

Organizational leaders typically construct the necessary data chart by using key median indicators from Standard & Poor’s, Fitch Ratings, or Moody’s Investors Service for similarly rated organizations. These indicators include revenue, income, cash, and debt figures as well as profitability, debt, and liquidity ratios. (See Table 8 for financial credit analysis highlights for a sample health system.) An analysis of the data enables the board and management to draw conclusions or make key observations about relative performance. Benchmarking against median data often enables organizations to identify negative trends that must be addressed in order to preserve or enhance the organization’s credit rating.

Using Financial Dashboards
Many organizations use financial “dashboards,” which present key financial data on one or two pages, enabling executives and trustees to track performance of important indicators on a regular basis. Exhibit 10 provides an example of a monthly dashboard used by one health system. As evident, the dashboard is a credit analysis, as described earlier, with an extra column that indicates (using green and red arrows) whether the trend for each line item is positive or negative.

| Table 8—Financial Credit Analysis Highlights For A Sample Health System (Dollars In Millions) |
|-----------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Net Patient Service Revenue                   | $258.8         | $337.6          | $537.1          | $577.0          | $628.9          | $746.4          |
| Operating Income                              | $7.7            | -               | $17.0           | $12.3           | $10.3           | ($4.0)          |
| Operating EBIDA                               | $28.4           | -               | $72.8           | $73.1           | $73.0           | $61.6           |
| Net Income                                    | $36.9           | -               | $29.2           | $33.2           | $18.1           | $21.6           |
| Cash Flow (Net Income + Depreciation)         | -               | -               | $69.1           | $77.0           | $85.5           | $72.2           |
| Unrestricted Cash                             | $118.2          | -               | $267.2          | $294.7          | $304.1          | $328.5          |
| Total Debt                                    | $100.2          | -               | $342.5          | $414.4          | $429.2          | $414.5          |
| Capital Expenditures                          | -               | -               | $50.8           | $81.4           | $93.8           | $95.1           |

**Profitability**

| Ratio/Statistic                               | Actual          | 2004            | 2005            | 2006            | 2007            |
| Operating Margin                              | 2.4%            | 2.8%            | 2.9%            | 1.9%            | 1.5%            | (0.5%)          |
| Operating EBIDA Margin                        | 9.1%            | 12.4%           | 12.5%           | 11.5%           | 10.6%           | 7.9%            |
| Excess Margin                                 | 4.9%            | 5.0%            | 4.9%            | 5.1%            | 2.6%            | 2.7%            |

**Debt Position**

| Ratio/Statistic                               | Actual          | 2004            | 2005            | 2006            | 2007            |
| MADS Coverage (x)                             | 4.0             | 4.2             | 3.2             | 3.6             | 3.9             | 3.4             |
| Debt to Capitalization                         | 38.0%           | 40.9%           | 47.7%           | 50.2%           | 50.6%           | 47.8%           |
| Debt to Cash Flow (x)                          | 3.6             | -               | 5.1             | 5.5             | 5.1             | 5.9             |

**Liquidity**

| Ratio/Statistic                               | Actual          | 2004            | 2005            | 2006            | 2007            |
| Cash to Debt                                  | 109.0%          | 111.0%          | 76.3%           | 69.2%           | 69.5%           | 77.5%           |
| Days Cash on Hand                             | 165.8           | 184.1           | 185.0           | 185.5           | 175.2           | 163.3           |
| Days in A/R, Net                              | 50.6            | 46.4            | 70.5            | 66.9            | 59.3            | 64.3            |

**Other**

| Ratio/Statistic                               | Actual          | 2004            | 2005            | 2006            | 2007            |
| Average Age of Plant                          | 9.9             | 9.7             | 6.5             | 6.6             | 7.1             | 7.3             |
| Capital Spending Ratio                        | 140.0%          | 179.6%          | 127.4%          | 185.7%          | 204.1%          | 187.8%          |
| Compensation Ratio                            | -               | 49.7%           | 54.7%           | 53.3%           | 53.6%           | 52.0%           |

Source: Kaufman, Hall & Associates, Inc.
Exhibit 10. Financial Dashboard

**CREDIT PROFILE ($ in 000s)**

<table>
<thead>
<tr>
<th>Ratio/Statistic</th>
<th>S&amp;P(1) “BBB”</th>
<th>Fitch(2) “BBB”</th>
<th>Moody’s(3) “Baa2”</th>
<th>Fiscal Year</th>
<th>Budget Year 5</th>
<th>Desirable Trend(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
</tr>
<tr>
<td>Net Patient Service Revenue</td>
<td>111,000</td>
<td>131,397</td>
<td></td>
<td>$30,526</td>
<td>$32,097</td>
<td>$32,555</td>
</tr>
<tr>
<td>Operating Income</td>
<td></td>
<td></td>
<td></td>
<td>$938</td>
<td>$1,035</td>
<td>$426</td>
</tr>
<tr>
<td>Net Income</td>
<td></td>
<td></td>
<td></td>
<td>$1,143</td>
<td>$804</td>
<td>($4,421)</td>
</tr>
<tr>
<td>Cash Flow (Net Inc + Dep)</td>
<td></td>
<td></td>
<td></td>
<td>$2,683</td>
<td>$2,328</td>
<td>($2,385)</td>
</tr>
<tr>
<td>Unrestricted Cash</td>
<td></td>
<td></td>
<td></td>
<td>$3,504</td>
<td>$4,300</td>
<td>$6,890</td>
</tr>
<tr>
<td>Long-Term Debt</td>
<td></td>
<td></td>
<td></td>
<td>$6,754</td>
<td>$4,776</td>
<td>$27,113</td>
</tr>
</tbody>
</table>

**Profitability**
- Operating Margin: 1.4% 1.0% 1.2%
- Operating EBITDA Margin: 8.7% 9.1% 8.4%
- Excess Margin: 2.7% 2.4% 3.1%

**Debt Position**
- MADS Coverage (x): 2.8 — 2.9
- Debt to Capitalization: 40.7% 47.3% 48.8%

**Liquidity**
- Cash to Debt: 80.4% 82.1% 65.1%
- Days Cash On Hand (days): 110.0 117.5 107.4
- Days in A/R, net: 51.5 51.3 52.3

**Other**
- Average Age of Plant: 10.1 9.3 8.8
- Compensation Ratio: 53.2% 52.5% —

*Note(1): rating agency median data represents year 5 median information
Note(2): Arrow indicates direction of desired trend; shading indicates TBH’s year 5 performance relative to calendar year 4 (green favorable, red unfavorable)

Conclusion

Healthcare leaders must take exceptional care of the organization’s financial health. Trustees and executives of hospitals and health systems can have significant impact on their organization’s finances, either positively or negatively.

This publication has touched on some of the key concepts and tools used in hospitals and health systems across the U.S. Board members must understand and feel comfortable with these concepts; the importance of this cannot be understated. In today’s healthcare environment, trustees and senior executives cannot assume that someone else—other “more knowledgeable” members of the finance committee or senior managers—are solely responsible for “the numbers.”

If reading this has left you with more questions than when you started, please insist on further information and education to understand the reports you receive and the trends they may indicate. Your organization’s financial health and future depends on such understanding.