CHAPTER 2
ORGANIZATION OF FINANCIAL MANAGEMENT

One of the signs of excellence in a manager is the ability to anticipate problems, not just react to them.

Sir Liam Donaldson, former chief medical officer of National Health Service, England

Learning Objectives

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

➤ Understand how healthcare organizations are organized
➤ Understand how chief financial officers receive their authority regarding the financial matters of the organization
➤ Identify the roles and responsibilities of the key financial managers
➤ Examine the alternative corporate structures available to healthcare organizations

Note: Terms shown in boldface in this chapter are defined in the margins and appear in the glossary. Terms in boldface italic do not appear in the margins but do appear in the glossary.
**Introduction**

The successful accomplishment of organizational purposes requires a sound organizational structure. After the governing body has established a healthcare organization's purposes, management must determine the best way to accomplish them. To do so, management must identify and assign tasks to employees, departments, and divisions. In other words, management must organize. According to Dunn (2021), organizing includes

- **specialization**: dividing tasks into manageable categories and assigning the categories to employees with the appropriate skills;
- **departmentalization**: dividing employees into groups or teams that have similar responsibilities;
- **defining the span of management**: determining the optimum number of employees that a manager can manage, based on the nature of the tasks and the background of the employees;
- **defining authority**: determining the amount of authority to delegate to employees so that they can perform their assigned tasks;
- **defining responsibility**: determining the obligation necessary to perform assigned tasks;
- **establishing a unity of command**: appointing one manager to be responsible for a group of employees; and
- **defining the nature of relationships**: determining whether managers and employees have a line or staff relationship in the organization. In a line relationship, the manager or employee is directly responsible for resources, such as employees and supplies. In a staff relationship, the manager or employee acts in an advisory capacity without direct control over resources.

Most healthcare organizations are organized as legal entities called corporations. Corporate status is granted by the state and provides advantages for the healthcare organization. Corporate status provides limited liability, meaning that the owners of the corporation are seldom found to be personally liable for the contracts or negligence of the corporation. Another advantage of corporate status is its continuity of existence, meaning that the corporation continues even after the death of an owner. The third advantage of corporate status is the increased ability to raise capital, because the risk of investing in a corporation is only financial. In the case of for-profit corporations, a fourth advantage of corporate status is that shareholders are free to sell their shares at any time. For further discussion of these advantages, refer to *The Law of Healthcare Administration* (Showalter 2020).
This chapter provides a comprehensive description of the organization of financial management in healthcare organizations.

**Governing Body**

The governing body of a healthcare organization is responsible for the proper development, utilization, and maintenance of all resources in the organization. The governing body typically delegates the authority for accomplishing this duty to the organization’s CEO. However, the governing body maintains legal responsibility for the organization. Because of this fact, courts continue to stress the importance of the governing body’s duty of responsibility in selecting a competent CEO.

The governing body uses organized committees to monitor the CEO’s performance. Although committee structures vary from organization to organization, an **executive committee** of the governing body typically monitors all committees and includes the chairs of all the committees as members. The executive committee acts on behalf of the full governing body for emergencies that might occur between governing body meetings. The **finance committee** provides oversight for financial affairs. This committee includes governing body members with a financial interest or occupation. The **audit committee** selects an independent audit and then serves as the link between the independent auditor and the governing body. The **investment committee** provides investment policy recommendations and then monitors actual investment performance against the approved investment policy (Board-Source 2018). In smaller organizations, the duties of the finance committee also include audit and investment responsibilities. Generally, the CEO and/or the chief operating officer (COO) and chief financial officer (CFO) attend finance committee meetings ex officio and also serve as staff support to those committees. Exhibit 2.1 identifies these relationships.

The governing bodies of healthcare organizations with corporate status cannot be held personally liable for either the contracts of the corporation or the negligence of the corporation’s employees or agents (i.e., physicians). However, the governing body can be held collectively liable for a breach of its duty to act as a **fiduciary**, which means its duty to act as a person in a position of great trust and confidence. The legal duties of a fiduciary include loyalty and responsibility. **Loyalty** requires fiduciaries to act in the best interests of the healthcare organization and to subordinate their personal interests to those of the organization. **Responsibility** requires fiduciaries to act with reasonable care, skill, and diligence in accomplishing their duties as members of the governing body (Showalter 2020).

After the Enron bankruptcy, the federal government passed strict corporate accountability standards known as the Sarbanes-Oxley Act of 2002 (SOX; see appendix 1.1 in chapter 1). While the standards only apply to publicly held, for-profit organizations, many not-for-profit organizations are attempting to comply with the standards as best practice. Concerned that SOX compliance costs would force not-for-profits out of business in a sluggish economy, states have been reluctant to pass comprehensive legislation. However,
CRITICAL CONCEPTS
The Trustees’ Responsibility

The governing body of a healthcare organization is responsible for hiring a competent CEO. Of course, that does not always happen. When a board fails in that regard, it can be in legal trouble. In Reserve Life Insurance Company v. Salter (1957), one of the first cases establishing this duty, the court was severe in its finding: “Failing to appreciate their duties and responsibilities led these trustees to feel, according to their testimony, that they had discharged their duties by picking as administrator, Salter, a former school teacher, apparently as ignorant of operating a hospital as they themselves were.”
several states have established audit thresholds typically holding larger not-for-profits to stricter audit standards (Cohen 2012).

Financial Organization

In November 2003, Richard Scrushy, founder and former chair of for-profit HealthSouth, was indicted for 85 counts of conspiracy, fraud, and money laundering. The indictment alleged that Scrushy was the mastermind of a wide-ranging scheme to inflate the rehabilitation and outpatient-care company’s earnings to meet Wall Street expectations. The indictment further alleged that Scrushy added at least $2.7 billion in fictitious income to HealthSouth’s books during a multiyear conspiracy dating back to 1996. Scrushy became the first CEO (and as a result, healthcare became the first industry) indicted under Sarbanes-Oxley, which holds the CEO personally liable for financial misreporting. In what was characterized as healthcare’s trial of the century, the jury in the five-month Scrushy trial acquitted Scrushy of all federal charges after 21 days of deliberation. Even though five of HealthSouth’s CFOs testified against Scrushy, the jury chose to favor the defense’s portrayal of Scrushy’s character. Legal analysts also criticized the prosecution’s strategy to prove 85 counts over a six-month trial (Piotrowski 2003).

Chief Financial Officer

In larger healthcare organizations, the CEO delegates the authority for accomplishing the duties related to financial management to the CFO. However, the CEO has become increasingly involved in financial matters in recent years. In fact, in a 2019 survey conducted by the American College of Healthcare Executives, CEOs ranked financial concerns as their top concern for the seventeenth consecutive year. Analyzing CEO responses, their top financial concerns were increasing costs of staff and supplies and decreasing Medicaid reimbursement (ACHE 2020).

The Committee on Ethics and Eligibility Standards of the Financial Executives Institute has provided the following classic definition of the CFO’s duties (Berman, Kukla, and Weeks 1994):

1. Establish, coordinate, and maintain, through authorized management, an integrated plan for the control of operations. Such a plan would provide cost standards, expense budgets, sales forecasts, profit planning, and programs for capital investments/financing to the extent required in the business.

2. Measure performance against approved operating plans and standards, and report and interpret the results of operations to all levels of management. This function includes the design, installation, and maintenance of accounting policy and the compilation of statistical records as required.
3. Measure and report on the validity of the objectives of the business and on the effectiveness of its policies, organization structure, and procedures in attaining those objectives. This function includes consulting with all segments of management responsible for policy or action concerning any phase of the operation of the business as it relates to the performance of this function.

4. Report to government agencies as required and supervise all matters relating to taxes.

5. Interpret and report on the effect of external influences on the attainment of the objectives of the business. This function includes the continuous appraisal of economic and social forces and of government influences as they affect the operations of the business.

6. Provide protection for the assets of the business. This function includes establishing and maintaining adequate internal control and auditing and ensuring proper insurance coverage.

At the 2003 CFO Exchange sponsored by the Healthcare Financial Management Association (HFMA) through its CFO Forum, HFMA President Dick Clarke introduced a healthcare financial competency model identified in exhibit 2.2 that demands new, more complex roles for healthcare CFOs in addition to more traditional roles. In a 2019 survey of healthcare CFOs, all the CFOs emphasized “strategic thinker with an external focus”

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Source: Clarke (2003).
as a necessary role for future CFOs. Richard L. Grundling, HFMA senior vice president, Healthcare Financial Practices, points out the importance of CFOs educating and coaching non–financial managers on how they can use financial data to improve their performance (Hegwer and Hut 2019). Maintaining ethical standards while fulfilling these roles requires integrity and courage. CFOs should model ethical behavior and create a culture wherein transparency is encouraged (Hegwer 2019).

Do CFOs and accountants have personalities conducive to these expanded roles demanding new competencies? Using Myers-Briggs personality typing, several studies have shown that the predominant personality types of accountants are

- introversion (I) (versus extroversion),
- sensing (S) (versus intuitive),
- thinking (T) (versus feeling), and
- judging (J) (versus perceiving).

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**CRITICAL CONCEPTS**

**Who Makes a Good CFO?**

Successful CFOs require a broad range of traits and skills. As we headed into the twenty-first century, one survey of healthcare CFOs (Doody 2000) identified five traits possessed by born leaders that CFOs must nurture:

1. Strategic thinking
2. Ability to adjust to change
3. Personal integrity
4. Vision
5. Ability to be a team player

The CFO survey also identified six acquired leadership skills:

1. Communicate clearly
2. Provide leadership in day-to-day operations
3. Manage resources and finances
4. Build coalitions
5. Create a positive organizational culture
6. Maintain strong physician relationship
A classic study by Laribee (1994) reported that 37.3 percent of the study sample were STJs (significant compared with 20.5 percent found in the general population), and 56.0 percent were I types (significant compared with 40.1 percent found in the general population). The consistency among the findings of the personality studies on accountants is remarkable considering when the studies were conducted (from 1980 to 1997) and where the studies were conducted (United States, United Kingdom, and the Netherlands).

ISTJs represent 11 to 14 percent of the American population and are serious, responsible, sensible, and trustworthy, and they honor their commitments. Practical and realistic, they are matter-of-fact and thorough. They are painstakingly accurate and methodical and have great powers of concentration. They value and use logical and impersonal analysis and are organized and systematic in getting things done on time (Myers & Briggs Foundation 2020).

Do CFOs have the same personalities as accountants, or do only the extroverted accountants become CFOs? In a survey of healthcare senior financial executives (which includes not only CFOs but also vice presidents of finance) conducted by HFMA and Texas State University, it was reported that 37.8 percent of the sample were STJs (compared with 37.3 percent found in the accountant sample and 20.5 percent found in the general population), and 57.0 were I types (compared with 56.0 found in the accountant sample and 40.1 percent found in the general population), confirming that healthcare CFOs in the early twenty-first century had personalities similar to those of accountants (Nowicki 2003). A healthcare finance executive study published in 2015 found a shift from introversion to extroversion as well as higher levels of sensing (Lieneck and Nowicki 2015).

**MINI-CASE STUDY**

Suppose you are the chief financial officer of Smithsville Hospital, and you have recently implemented a budget reduction throughout the hospital. You want to ensure that your actions are accepted among the hospital department managers. What would be the best way to communicate with these department managers? If there is resistance, what should you do?

**CONTROLLER AND TREASURER**

Reporting to the CFO are the **controller** and the **treasurer**. The controller is the chief accounting officer of the healthcare organization and is usually responsible for financial accounting, managerial accounting, tax accounting, patient accounting, and the day-to-day supervision of internal auditing. The treasurer is responsible for managing working capital, the healthcare organization’s investment portfolio, and the financing of capital expenditures. In smaller organizations, the controller function and the treasurer function may be combined into one position, or they may be integrated with the CFO’s responsibilities.
**CORPORATE COMPLIANCE OFFICER**

Most organizations have a corporate compliance officer (CCO) in their senior management team. The final compliance program guidelines for hospitals issued by the US Department of Health and Human Services (HHS) Office of Inspector General (OIG) in 2003 list the appointment of a CCO as a critical element of any corporate compliance plan. Section 6401 of the Affordable Care Act (ACA) requires every healthcare entity to have a corporate compliance plan and officer; however, specific deadlines for every entity have not been published in federal regulations (Willis 2018). Healthcare compliance officers usually report directly to the CEO or board and are traditionally seen as peers of the CFO (Doody 1998).

CCOs are typically responsible for conducting compliance reviews (to assess how well the organization complies with fraud and abuse laws), investigating potential fraud and abuse problems, and examining relationships and contracts for possible illegal provisions. When an organization does not have a CCO, then a COO, staff or retained attorneys, or a CFO may perform these functions. Because no education, certification, or licensure is required for CCOs, CEOs have tended to seek individuals who understand the legal issues involved with compliance and exhibit the following personal characteristics that might support the compliance functions (Doody 1998):

- Analytical, inquisitive, persistent
- Detail-minded
- Skilled in dealing with people
- Dispassionate and objective
- Courageous
- Discreet
- Has a strong moral sense

In its 2019 survey of compliance officers, the Health Care Compliance Association (HCCA) found that 69 percent of compliance officers had an advanced degree, including 22 percent with a JD degree, and 58 percent were certified in healthcare compliance (HCCA 2019).

**CHIEF INFORMATION OFFICER**

Given the increasing importance of clinical information systems, the role of the chief information officer (CIO) is growing. Typically reporting directly to the CEO, the CIO is responsible not only for providing management oversight to all information processing and telecommunications systems in the organization but also for assisting senior management...
in using information in management decision making (Smaltz, Glandon, and Slovensky 2021). The responsibilities of CIOs include e-commerce, e-health, and other web-based and multimedia technologies; business-service formats to respond tactically to strategic business initiatives; and outsourcing of all or a portion of the information technology departments. As CIOs become an accepted part of the executive team, leadership skills will become more important and technology skills will become less important. In fact, CIOs have delegated many of their technology responsibilities to chief technology officers.

**Privacy Officer and Security Officer**

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) mandated privacy and security regulations for the healthcare industry. HHS’s final rule on privacy, which was issued in 2002, requires that an “entity must designate a privacy official who is responsible for the development and implementation of the privacy policies and procedures of the entity” (HHS2013a). HHS’s final rule on security, which was issued in 2003, requires that the “entity must designate a security official who is responsible for developing and implementing its security policies and procedures” (US Department of HHS 2013b). The American Health Information Management Association (AHIMA) makes a good case that health information management (HIM) professionals should have the training and experience to handle most of the skills required for privacy and security officers, and in 2002 AHIMA introduced a certification in healthcare privacy, which subsequently became a certification in healthcare privacy and security, or CHPS(AHIMA 2020).

HIM professionals should have the following traits (Dennis 2001):

- HIPAA competency
- Knowledge of how confidential information is used
- Knowledge of how confidential information is disclosed
- Knowledge of information technology
- Knowledge of state and federal laws on information
- The ability to promote unpopular positions

**Independent Auditor**

Independent auditors are retained by the healthcare organization to ensure that the financial reports sent to external agencies are in the correct accounting format. Examples of external agencies include the state and federal government, commercial insurance companies, and lenders. The correct accounting format means that the healthcare organization used
generally accepted accounting principles (GAAP) in preparing the report. However, use of GAAP does not guarantee that the healthcare organization is financially sound. Statement on Auditing Standards (SAS) No. 99, Consideration of Fraud in a Financial Statement Audit, which supersedes SAS No. 82, on the same issue, requires independent auditors to obtain reasonable assurance that financial statements are free of material misstatements caused by error or fraud. SAS No. 99 provides guidelines and expanded procedures for independent auditors to use to help detect and document risk factors related to potential fraud. Healthcare organizations and independent auditors should discuss thoroughly the scope and focus of the audit as it relates to the organization's compliance efforts (Carmichael 2018).

Independent auditors typically audit the healthcare organization once each year. The duration of the audit partially depends on the size of the organization. At the end of the audit, the independent auditor produces an audit report made up of three paragraphs:

1. The introductory paragraph identifies the financial statements audited, management’s responsibilities in preparing the financial statements, and the auditor’s responsibilities in expressing the audit opinion.

2. The scope paragraph describes the criteria used in the audit (for instance, GAAP).

3. The opinion paragraph includes the auditor’s statement about whether the financial statements are in the correct accounting format.

A fourth paragraph, the explanatory paragraph, is included only if GAAP were not used in preparing the financial statements or if any uncertainty exists regarding how the financial statements were prepared. The AICPA Audit and Accounting Guide for Health Care Entities published by the American Institute of Certified Public Accountants (AICPA 2019) provides requirements of audit reports as well as the financial statements.

The opinion paragraph is the heart of the audit report. Independent auditors use four types of opinions in rendering their reports:

1. An unqualified opinion means that, in all material respects, the financial statements fairly present the financial position, results of operations, and cash flows of the organization in conformance with GAAP. An unqualified opinion may have an additional explanatory paragraph, but an explanatory paragraph does not affect the opinion. Auditors use an explanatory paragraph when they are basing their opinion in part on the work of another external auditor, or when they need additional information to prevent the audit report from being misleading when uncertainties exist that they cannot reasonably resolve by the publication date of the audit report.
2. A **qualified opinion** means that the financial statements fairly present, in all material respects, the financial position, results of operations, and cash flows of the organization in conformance with GAAP, except for matters identified in additional paragraphs of the report. Auditors use a qualified opinion when there is insufficient evidentiary matter, when the organization has placed restrictions on the scope of the audit, or when the financial statements depart in a material, though not substantial, manner from GAAP.

3. An **adverse opinion** means that the financial statements do not fairly present the financial position, results of operations, and/or cash flows of the organization in conformance with GAAP. Auditors use additional paragraphs after the opinion to describe the reasons for an adverse opinion.

4. A **disclaimer of opinion** means that the auditor does not express an opinion on the financial statements, usually because the scope of the audit was insufficient for the auditor to render an opinion.

**Internal Auditor**

Internal auditors differ from independent auditors in a number of ways. Whereas an independent auditor is typically a large accounting firm that has a contract with the healthcare organization, an internal auditor is an employee of the organization who usually reports to the controller for day-to-day matters. The independent auditor’s primary concern is the financial reporting needs of external entities, and the internal auditor’s primary concern is protecting the organization’s assets from fraud, error, and loss. The independent auditor’s responsibilities are limited primarily to financial matters; the internal auditor’s responsibilities include both financial and operational matters. The independent auditor is only incidentally concerned with identifying fraud (i.e., the independent auditor is not looking for fraud but is duty-bound to report any fraud found in the organization to the party that engaged the auditor’s services); the internal auditor is directly concerned with identifying fraud.

**Alternative Corporate Structures**

As previously mentioned, healthcare organizations are chartered as corporations by the state. Prior to the late 1970s, most healthcare corporations consisted of one corporation or a limited number of corporations. Beginning in the late 1970s, a legal strategy called **corporate restructuring** became popular in response to increasing economic pressures on healthcare organizations. The purpose of corporate restructuring was to maximize the economic position of the healthcare organization by developing new corporations (see Stromberg 1982).
Typically, healthcare organizations restructure for one or more of the following four reasons, which dictate the corporate restructuring model:

1. A private foundation is an independent legal entity set up for charitable purposes such as education, research, or the provision of charity care. A **private foundation** is developed and under the control of the donor who determines the foundation’s mission, governing body, investment strategy, and disbursement of funds. In the case of a for-profit donor, the foundation also allows the for-profit donor to shelter some income from taxes by using the income for purposes that are tax-exempt (Foundation Source 2020).

2. Healthcare organizations that need to protect assets may develop a parent holding corporation. For example, healthcare organizations may develop several parent corporations to layer their liability in the event of malpractice suits (Feldman 2019). Courts allow only the assets of the organization, and not the assets of the parent corporation, to be introduced during deliberations regarding damage awards.

3. Healthcare organizations that need to maximize patient care and other operating revenues and even nonoperating revenues may develop an **independent subsidiary** corporation. In this model, the healthcare organization usually controls at least 51 percent of the governing body of the subsidiary corporation but has a limited role in the day-to-day operations (Dontigney 2020). For example, a healthcare organization may develop a gift shop whose governing body usually uses the income to benefit the healthcare organization. The healthcare organization believes that the perception of independence on the part of customers in terms of who controls the employees or volunteers gives the gift shop an advantage in generating revenue. Customers are more likely to buy gifts in an “independent” corporation than to buy gifts from the healthcare organization that sends them a bill.

4. Healthcare organizations that want to maximize their available capital, or minimize their risk, or collaborate with physicians may develop a **joint venture**, which involves two or more organizations entering into a formal agreement for a particular project by identifying capital investment, operating control, and income distribution (Corporate Finance Institute 2020). As a result of the demand shock of COVID-19, smaller organizations including physician practices will be seeking joint ventures and other remedies with larger organizations to benefit from economies of scale (Mulvany 2020).
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Although corporate restructuring was popular in the late 1970s and 1980s, both Medicare and the Internal Revenue Service (IRS) have increased their interest in the resulting corporations. For instance, Medicare’s position has been that a portion of the income generated by subsidiary corporations such as the previously described gift shop should be deducted from the amount Medicare owes the healthcare organization under cost-based reimbursement. Medicare reasons that a portion of the gift shop sales is attributable to Medicare patients and their visitors.

The IRS’s position is that corporate restructuring that allows a corporation to avoid paying taxes should be reviewed to ensure that the primary purpose of the corporate restructuring is legitimate. Areas of concern include the unrelated business income generated by subsidiary corporations (e.g., parking garages, adjacent hotels, catering services). Chapter 4 provides an overview of the tax status of corporations and reviews in detail the tax-exempt organization.

Organizations Designed to Integrate Care

Physicians historically have not been employed by hospitals. Rather, most are independent practitioners who use the hospital facilities to treat their patients. However, healthcare organizations have been attempting to integrate physicians into the organizational setting for decades. Many healthcare leaders and payers, such as Medicare and Medicaid, believe that integrating the delivery and financing of care into one organization would result in higher-quality healthcare delivered at a lower cost. However, many physicians and other professional providers are accustomed to practicing with a great deal of autonomy and have resisted efforts to coordinate and integrate their care.

In the early 1980s, employers began to seek an integrated delivery system—an organized group of healthcare providers capable of delivering a continuum of care to a defined population while accepting clinical and financial responsibility. These systems promised higher quality at lower costs by reducing errors. One study found that the cost of preventable medical errors in the United States reached $19.5 billion in 2008, resulting

MINI-CASE STUDY

Mr. Jones, an 87-year-old widower who lives alone, was admitted to the hospital through the emergency room for shortness of breath and swollen ankles. After an extensive interview, the admitting physician discovered that Mr. Jones had been admitted two weeks earlier with the same symptoms and had been diagnosed with congestive heart failure. At that time he spent four days in the hospital and then was transferred to a skilled nursing facility, where he spent three days before being discharged with a prescription for a diuretic to help reduce fluid buildup. The admitting physician discovered that no one at the hospital or the skilled nursing facility had explained to Mr. Jones the importance of maintaining a low-sodium diet (high-sodium diets cause fluid retention). Mr. Jones had attended a birthday party and eaten several hot dogs before his latest symptoms appeared. Who should be financially responsible for the costs related to Mr. Jones’s latest admission? Should Medicare, or any insurer, pay for readmissions related to errors in discharge instructions? Would it be different had Mr. Jones received instructions for a low-sodium diet but chosen to ignore them?

Integrated Delivery System

An organized group of healthcare providers capable of delivering a continuum of care to a defined population while accepting clinical and financial responsibility.
in 2,500 preventable deaths and 10 million lost days of work (Society of Actuaries 2010). Direct medical costs accounted for about $17 billion of that total cost, while additional costs of about $1.4 billion were attributed to increased mortality rates and another $1.1 billion to loss of productivity from the 10 million days of missed work because of the preventable medical error, based on short-term disability claims (Andel et al. 2012). Extrapolating cost numbers to either the 98,000 preventable medical error deaths per year in the United States reported by the Institute of Medicine (IOM 1999) or the 251,000 preventable medical error deaths per year reported by Johns Hopkins (Makary and Daniel 2016), the annual cost of preventable medical errors could be as much as $1 trillion.

To better coordinate care, many hospitals have initiated a **physician–hospital organization (PHO)**, a joint venture capable of delivering a continuum of care to a defined population while accepting clinical and financial responsibility.

In 2005, the Medicare Payment Advisory Commission (MedPAC) reported that future government reimbursement for health services should be based on four criteria—one of which was high-quality, cost-effective care (MedPAC 2005). In 2006, President George W. Bush signed an executive order asking federally sponsored health plans, including Medicare, to adopt the four criteria. The concept of an **accountable care organization (ACO)**, which emphasizes coordinated care and provider accountability, was born in 2007 (Fisher et al. 2007). The ACO concept includes financial incentives for organizations that take responsibility for the quality and cost of patient care to a defined population. In 2009, MedPAC recommended that Medicare encourage the development of ACOs, and Section 3022 of the Affordable Care Act of 2010 encouraged the voluntary development of ACOs (Tuma 2010). By the end of 2019, 1,588 Medicare ACOs existed, covering 44 million lives (Muhlestein et al. 2019).

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**Chapter Key Points**

- The governing body of a healthcare organization has several duties, including proper development of resources and monitoring of the CEO’s performance.
- If a governing body breaches its duty, it may be legally liable.
- The CFO is responsible for financial management of the organization, a responsibility that requires the skills of a supervisor and intrinsic traits.
- The CCO’s duty is to ensure that the organization supports compliance functions.
- The CIO is responsible for information processing and telecommunications systems of the organization.
- Other management positions in an organization include the privacy officer, security officer, internal auditor, and independent auditor.
Corporate structures include private foundations, parent holding corporations, independent subsidiaries, and joint ventures.

Organizations designed to integrate patient care include integrated delivery systems, physician–hospital organizations (PHOs), and accountable care organizations (ACOs).

**Discussion Questions**

1. How would you explain the meaning of corporate status in relation to healthcare organizations? What are the advantages corporate status provides?

2. What is the role of the governing body? How does the governing body use organized committees to monitor the performance of the CEO?

3. What are the responsibilities of the CFO? What are the characteristics and traits of a successful CFO?

4. Although both the corporate compliance officer (CCO) and the chief information officer (CIO) report to the CEO, what are the primary aspects of their individual roles that distinguish these positions?

5. How would you compare the roles of the privacy officer and the security officer?

6. How would you compare the roles of the internal auditor and the independent auditor? What must the independent auditor include in the audit report?

7. How would you describe organizational models that attempt to integrate patient care, including the differences among them?

**References**


Chapter 2: Organization of Financial Management


For all healthcare entities, the new standard (FASB Accounting Standards Update (ASU 2014-09, Revenue from Contracts (Topic 606) effective in 2018) is going to affect the way that healthcare organizations account, report, and recognize revenues associated with their business; more importantly, it’s going to impact the systems, processes, and controls around how they accumulate that information and how it gets reported.


Learning Objectives

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

➤ Identify and understand the major components of financial statements
➤ List in order and explain each step in the financial analysis process
➤ Explain the principles in preparing good financial reports

Note: Terms shown in **boldface** in this chapter are defined in the margins and appear in the glossary. Terms in **boldface italic** do not appear in the margins but do appear in the glossary.
**INTRODUCTION**

Financial analysis and management reporting are integral parts of the management functions of control and financial management. Financial analysis includes methods used by investors, creditors, and management to evaluate the past, present, and future financial performance of a healthcare organization. On completion of the analysis, the information is reported to the appropriate stakeholders, inside and outside the organization, at which time the stakeholders take action in the form of decisions.

**STEPS IN FINANCIAL ANALYSIS**

Financial analysis includes the following three steps:

1. Establish the facts about the organization.
2. Compare the facts about the organization over time and with facts about similar organizations.
3. Use perspective and judgment to make decisions regarding the comparisons.

Financial analysis by management can occur at any level—departmental, divisional, or organizational—within the organization.

At the organizational level, establishing the facts (the first step) usually relates to a review of the organization's key financial statements, including the balance sheet, statement of operations, statement of changes in net assets, and statement of cash flows. As recommended by the American Institute of Certified Public Accountants (AICPA 2012), healthcare organizations with permanent controlling financial interests in other healthcare organizations should prepare consolidated financial statements to properly report the relationship. Before they undertake financial analysis, investors and creditors may require that independent auditors review the financial statements to confirm their accuracy.

The second step, comparing the facts about the organization over time and with facts about other, similar organizations, includes ratio analysis, horizontal analysis, and vertical analysis. **Ratio analysis**, which was introduced in chapter 1, evaluates an organization’s performance by computing the relationships of important line items found in the financial statements. There are four kinds of ratios: liquidity, profitability, activity, and capital structure.

**Horizontal analysis** evaluates the trend in the line items by focusing on the percentage change over time. **Vertical analysis** evaluates the internal structure of the organization by focusing on a base number and showing percentages of important line items in relation to the base number. When ratio analysis, horizontal analysis, and vertical analysis have been completed, the organization can compare present ratios, trends, and percentages to its past ratios, trends, and percentages. The organization can also develop industry comparisons...
that compare the organization’s present ratios, trends, and percentages to those of other, similar organizations.¹

The third step of financial analysis, using perspective and judgment to make decisions, takes into account the information obtained in the first two steps, in addition to information derived from the decision maker’s unique perspective and judgment, to make the decision. Decisions that may at first appear to be contrary to the information provided in the first two steps may make perfect sense based on pressures from internal and external constituents, including medical staff, employers, regulators, donors, and others.

The example of a fictional facility, Bobcat Hospital, will be used to illustrate the financial analysis concepts in this chapter.

**Financial Statements**

The primary purpose of healthcare financial accounting is to produce the five reports required by generally accepted accounting principles (GAAP) for private hospitals, both not-for-profit and for-profit: (1) balance sheet, (2) statement of operations, (3) statement of changes in net assets, (4) statement of cash flows, and (5) explanatory notes to the financial statements. Some accounting terminology differs between the not-for-profits and the for-profits. Because most hospitals are not-for-profit, not-for-profit terminology will be used in this discussion. Government hospitals use GAAP promulgated by the Governmental Accounting Standards Board (GASB), which can differ from the Financial Accounting Standards Board (FASB) rules that not-for-profit and private hospitals use; GASB standards are not covered in this discussion (Conner 2020).

**Balance Sheet**

The *balance sheet* shows the organization’s financial position at a specific point in time, typically at the end of an accounting period (see exhibit 3.1). The balance sheet presents the organization’s assets, liabilities, and net assets (or shareholders’ equity in for-profit organizations) and its relationships, which are reflected in the following accounting equation:

\[
\text{Assets} = \text{Liabilities} + \text{Net Assets}
\]

**Assets** are economic resources that provide or are expected to provide benefit to the organization. **Current assets** are economic resources that have a life of less than one year (i.e., the organization expects to consume them within one year). Current assets are listed on the balance sheet in order of liquidity. **Cash** is money on hand and in the bank that the organization can access immediately. **Temporary investments** consist of money placed in securities with maturities up to one year, such as commodities and options. The category **receivables, net**—made up of patient accounts receivable, net of allowances for contractual
**Exhibit 3.1**

Bobcat Hospital
Balance Sheet as of December 31, 2020 and 2019
(in thousands)

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASSETS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>$124</td>
<td>$280</td>
</tr>
<tr>
<td>Temporary investments</td>
<td>45</td>
<td>30</td>
</tr>
<tr>
<td>Receivables, net</td>
<td>3,536</td>
<td>2,860</td>
</tr>
<tr>
<td>Inventory</td>
<td>175</td>
<td>140</td>
</tr>
<tr>
<td>Prepaid expenses</td>
<td>32</td>
<td>40</td>
</tr>
<tr>
<td>Total current assets</td>
<td>3,912</td>
<td>3,350</td>
</tr>
<tr>
<td>Noncurrent assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land, plant, and equipment</td>
<td>6,980</td>
<td>6,580</td>
</tr>
<tr>
<td>Less accumulated depreciation</td>
<td>1,730</td>
<td>1,259</td>
</tr>
<tr>
<td>Plant and equipment, net</td>
<td>5,250</td>
<td>5,321</td>
</tr>
<tr>
<td>Long-term investments</td>
<td>609</td>
<td>790</td>
</tr>
<tr>
<td>Other noncurrent assets</td>
<td>113</td>
<td>109</td>
</tr>
<tr>
<td>Total noncurrent assets</td>
<td>5,972</td>
<td>6,220</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>9,884</td>
<td>9,570</td>
</tr>
<tr>
<td><strong>LIABILITIES AND NET ASSETS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable</td>
<td>$302</td>
<td>$370</td>
</tr>
<tr>
<td>Notes payable</td>
<td>345</td>
<td>335</td>
</tr>
<tr>
<td>Accrued expenses payable</td>
<td>871</td>
<td>606</td>
</tr>
<tr>
<td>Deferred revenue</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Estimated third-party adjustments</td>
<td>137</td>
<td>224</td>
</tr>
<tr>
<td>Current portion of long-term debt</td>
<td>184</td>
<td>178</td>
</tr>
<tr>
<td>Total current liabilities</td>
<td>1,849</td>
<td>1,728</td>
</tr>
<tr>
<td>Noncurrent liabilities</td>
<td>3,600</td>
<td>3,500</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td>5,449</td>
<td>5,228</td>
</tr>
<tr>
<td><strong>NET ASSETS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unrestricted net assets</td>
<td>3,283</td>
<td>3,190</td>
</tr>
<tr>
<td>Restricted net assets</td>
<td>1,152</td>
<td>1,152</td>
</tr>
<tr>
<td>Total net assets</td>
<td>4,435</td>
<td>4,342</td>
</tr>
<tr>
<td><strong>Total liabilities and net assets</strong></td>
<td>$9,884</td>
<td>$9,570</td>
</tr>
</tbody>
</table>
allowances, charity care, and bad debt—represents money due to the organization from patients and third parties for services already provided. **Inventory** is the cost of food, fuel, drugs, and other supplies purchased by the hospital but not yet used or consumed. **Prepaid expenses** are expenditures made by the hospital for goods and services not yet consumed or used in hospital operations (sometimes referred to as deferred expenses), such as rent and insurance premiums.

**Noncurrent assets** are economic resources that have a life of one year or more (i.e., the organization expects to consume them over a span longer than one year). **Plant and equipment, net** consists of economic resources, such as land, buildings, and equipment, minus the amount that has been depreciated over the life of the buildings and equipment (which is called accumulated depreciation). **Long-term investments** are economic resources that the hospital owns, such as corporate bonds and government securities, and intends to hold for more than one year. **Other noncurrent assets** include assets limited as to use (by contracts with outside parties) and goodwill, which represents the amount above fair market value based on an entity’s future earning potential.

**Liabilities** are economic obligations, or debts, of the organization. **Current liabilities** are economic obligations, or debts, that are due within one year. **Accounts payable** are amounts the organization owes to suppliers and other trade creditors for merchandise and services purchased from them, but for which the organization has not yet paid. **Notes payable** are short-term obligations for which a formal contract has been signed, such as a short-term loan. **Accrued expenses payable** are liabilities for expenses that have been incurred by the hospital but for which the hospital has not yet paid, such as compensation to employees. **Deferred revenue** is money received by the hospital but not yet earned by the hospital, such as registration fees for an educational program not yet provided. **Estimated third-party adjustments** are approximations of how much money the organization will be required to return to third-party payers due to overpayments to the organization. **Current portion of long-term debt** is the amount of the organization’s long-term debt (not including interest) that is expected to be paid within one year.

**Long-term liabilities** are economic obligations, or debts, that are due in more than one year. **Long-term debt, net of current portion** is an economic obligation, or debt, that is due in more than one year, minus the amount that is due within one year.

**Net assets** is the current AICPA-approved term for the difference between assets and liabilities in not-for-profit healthcare organizations and represents the owner’s (community’s or religion’s) and others’ (donors external to the organization) financial interest in the organization. **Unrestricted net assets** include net assets that have not been externally restricted by donors or grantees, such as the excess of revenues to expenses from operations. Unrestricted net assets include net assets that are contractually limited by the governing body, such as proceeds of debt issues, funds deposited with a trustee and limited to use

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by an indenture agreement, and funds set aside under self-insurance arrangements and statutory reserve requirements. **Restricted net assets** include donor-restricted net assets that the organization can use for the donor’s specific purpose after the organization has met the donor’s restriction, such as an action by the organization. These net assets may have temporary restrictions related to a particular time frame or may have permanent restrictions that never expire, such as endowment funds. In fiscal years beginning after December 15, 2017, organizations were expected to present net assets in two categories: “net assets without donor restrictions” and “net assets with donor restrictions.” GAAP requires organizations to disclose the amount, purpose, and type of board restrictions for net assets without donor restrictions, and GAAP requires organizations to disclose the nature and amount of donor restrictions for net assets with donor restrictions (Connor and Mosrie 2016).

**Shareholders’ equity** is the current AICPA-approved term for the difference between assets and liabilities in for-profit healthcare organizations; it represents the ownership interest of stockholders in the organization. Shareholders’ equity is also called shareholders’ equity, owners’ equity, or net worth and comprises common stock and retained earnings. **Common stock** is money invested in the organization by its owners. **Retained earnings** result from income earned by the organization from operations minus dividends (distributions of earnings paid to stockholders based on the number of shares of stock owned).

**Statement of Operations**

The **statement of operations**, called the **income statement** in for-profit organizations, summarizes the organization’s net revenues, expenses, and excess of net revenues over expenses (called **income before taxes** in a for-profit organization) over a period of time (see exhibit 3.2). The relationship of the statement of operations to the balance sheet can be best expressed by the following expanded accounting equation:

\[
\text{Assets} = \text{Liabilities} + \text{Net Assets} + (\text{Net Revenue} - \text{Expenses})
\]

where the permanent accounts of the balance sheet, which are accounts that carry balances forward to the next year, relate to the temporary accounts of the statement of operations, which are accounts that zero out at the end of each year. To zero out the net results of the statement of operations at the end of the year, the net results are transferred to unrestricted net assets on the balance sheet (or to retained earnings on the balance sheet of a for-profit organization).

**Revenues** are the amounts earned by the organization or sometimes donated to it. **Gross patient services revenue** is the total amount of charges for patients utilizing the hospital, regardless of the amount actually paid. Deductions from gross patient services revenues...
revenue include amounts deducted from total charges to account for explicit price concessions, implicit price concessions, charges for charity care if not already deducted, and premium revenue so that premium revenue can be shown as a separate line item. GAAP does not require reporting of gross patient services revenue on the statement of operations, and thus it is not shown in the Bobcat Hospital example.

**Net patient services revenue** is money generated by providing patient care minus the amount the organization will not collect as a result of discounting charges per **explicit price concessions** and **implicit price concessions** (discount determinations made by the provider to the self-pay portion of the bill—often the result of high-deductible insurance policies) and providing charity care. For financial reporting purposes, patient services revenue does not include provisions for charity care because charity care was never intended

---

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REVENUES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net patient services revenue</td>
<td>$8,402</td>
<td>$8,119</td>
</tr>
<tr>
<td>Premium revenue on sponsored health plans</td>
<td>400</td>
<td>0</td>
</tr>
<tr>
<td>Other operating revenue</td>
<td>440</td>
<td>447</td>
</tr>
<tr>
<td><strong>Total operating revenue</strong></td>
<td><strong>9,242</strong></td>
<td><strong>8,566</strong></td>
</tr>
<tr>
<td></td>
<td>2020</td>
<td>2019</td>
</tr>
<tr>
<td><strong>EXPENSES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries, wages, and benefits</td>
<td>4,980</td>
<td>4,278</td>
</tr>
<tr>
<td>Supplies, drugs, and purchased services</td>
<td>3,080</td>
<td>2,956</td>
</tr>
<tr>
<td>Estimated bad debt expense</td>
<td>600</td>
<td>500</td>
</tr>
<tr>
<td>Depreciation expense</td>
<td>471</td>
<td>443</td>
</tr>
<tr>
<td>Interest</td>
<td>113</td>
<td>109</td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td><strong>9,244</strong></td>
<td><strong>8,286</strong></td>
</tr>
<tr>
<td></td>
<td>2020</td>
<td>2019</td>
</tr>
<tr>
<td><strong>OPERATING INCOME</strong></td>
<td>(2)</td>
<td>280</td>
</tr>
<tr>
<td></td>
<td>2020</td>
<td>2019</td>
</tr>
<tr>
<td><strong>NONOPERATING INCOME</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment income</td>
<td>95</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>2020</td>
<td>2019</td>
</tr>
<tr>
<td><strong>EXCESS OF REVENUE OVER EXPENSES</strong></td>
<td><strong>93</strong></td>
<td><strong>365</strong></td>
</tr>
<tr>
<td></td>
<td>2020</td>
<td>2019</td>
</tr>
<tr>
<td><strong>CHANGES IN NET ASSETS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add: Unrestricted net assets January 1</td>
<td>3,190</td>
<td>2,825</td>
</tr>
<tr>
<td>Unrestricted net assets December 31</td>
<td>3,283</td>
<td>3,190</td>
</tr>
<tr>
<td>Add: Restricted net assets January 1</td>
<td>1,152</td>
<td>1,152</td>
</tr>
<tr>
<td>Restricted net assets December 31</td>
<td>1,152</td>
<td>1,152</td>
</tr>
<tr>
<td><strong>Total net assets January 1</strong></td>
<td><strong>4,342</strong></td>
<td><strong>3,977</strong></td>
</tr>
<tr>
<td><strong>Total net assets December 31</strong></td>
<td><strong>4,435</strong></td>
<td><strong>4,342</strong></td>
</tr>
</tbody>
</table>

---

**Exhibit 3.2**
Bobcat Hospital Statement of Operations (in thousands) through December 31, 2020 and 2019

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to result in cash flow. GAAP in 2010 required that organizations report the amount of charity care recorded at cost along with the method of determining cost and the organization’s charity care policy in notes to the financial statements. (Bad debt is the accounting recognition of how much money the organization has billed but will not collect; the amount reported must be based on charges. Bad debt should not be confused with charity care. Bad debt expense reflects the amount for which the organization provided services with the expectation of payment. Charity care reflects services the organization provided with no expectation of payment.)

In 2012 GAAP moved bad debt from an operating expense to a deduction of revenue to account for the patient’s inability to pay deductibles for high-deductible health policies (which the organization knows at time of service). In 2014, FASB issued Accounting Standards Update 2014-09, Revenue from Contracts with Customers (Topic 606), new guidance for presenting bad debt required on financial statements produced after December 15, 2019. After recording revenue at the amount the organization expects to be paid, bad debt would then be recognized in two categories: classic bad debt (the organization believes the patient is able to pay, but the patient does not pay) recorded as a bad debt expense based on charges under operating expenses; and an implicit price concession (the organization believes the patient is unable to pay, often because of a high deductible, but the patient is not eligible for charity care, and the organization recognizes a write-off based on internal policy). The proposed new guidance for presenting bad debt would allow organizations to group patients with similar characteristics, such as true self-pay or high deductible (Connor and Mosrie 2016). Under the old standard, some healthcare organizations reported bad debt as the difference between the amount billed and the amount paid, even in cases where the healthcare organization never expected to receive the amount billed. Under the new standard, healthcare organizations are permitted to report bad debt only when an adverse event, such a bankruptcy or loss of employment, prevents an employee from paying the amount billed (Brand 2018).

Premium revenue is money generated from capitation arrangements that must be reported separately from patient services revenue because premium revenue is earned by agreeing to provide care, regardless of whether care is ever delivered. Other operating revenue is money generated from services other than health services to patients and enrollees. It may include revenue from rental equipment and office space, sales of supplies and pharmaceuticals, cafeteria and gift shop sales, and so on. Often the test for whether revenue is considered other operating revenue or nonoperating revenue is whether the revenue was generated in support of the organization’s mission statement. Why is it important to distinguish between operating and nonoperating revenue? Because for a not-for-profit hospital, income derived from operations is not taxed, but income from unrelated businesses, such as the gift shop, may be taxed as unrelated business income. Net assets released from restrictions used for operations, while not reflected in Bobcat Hospital's
statement of operations, consist of money previously restricted by donors that has become available for operations.

**Expenses** are the amounts of resources used by the organization. The category of *operating expenses* represents resources used on operations to generate revenue in support of the organization’s mission statement. These expenses can be listed by functional classification (organizational division), such as nursing department and support department, which is useful for internal purposes, or by natural classification, under such categories as salaries, wages, and benefits or supplies, drugs, and purchased services, as is the case with Bobcat Hospital’s statement of operations, which is useful for external purposes.

The category *depreciation and amortization* reflects the expensing of long-term assets over time to show their declining value. *Interest* is the expense incurred with borrowed money. *Other operating expenses* are miscellaneous expenses that have not been reported elsewhere.

**Operating income** is the money earned from providing patient care services and includes the total revenue, gains, and other support minus the total operating expenses. *Nonoperating income* is the money earned from non–patient care services, such as *investment income*, as shown on Bobcat Hospital’s statement of operations.

**Excess of revenues over expenses** (or *net income* in for-profit organizations) is the operating income plus the nonoperating income minus total expenses. For not-for-profit organizations, AICPA requires excess of revenues over expenses to be reported as the performance indicator that reflects the results of operations. Not-for-profit organizations must report the performance indicator in a statement of operations that also presents the total changes in unrestricted net assets. The notes to the financial statements should provide a description of the nature and composition of the performance indicator (AICPA 2012).

**Statement of Changes in Net Assets**

The *statement of changes in net assets*, called the *statement of equity* in a for-profit organization, shows the reasons why net assets changed from the beginning of the statement period to the end of the statement period as reported in summary fashion on the balance sheet. Because AICPA requires not-for-profit organizations to report changes of unrestricted net assets on the statement of operations, many organizations also include changes in restricted net assets on the statement of operations, which eliminates the need for a separate statement of changes in net assets. This statement is important in showing how the changes in the excess of revenues over expenses affect the net asset, or equity, position of the organization (as was shown in the example in exhibit 3.2).

The category *unrestricted net assets* comes directly from the statement of operations and has already been explained in that section. The category *restricted net assets* presents
the changes in restricted net assets during the statement period. Restricted net assets may be segregated into temporarily restricted net assets and permanently restricted net assets. Subcategories for temporarily restricted net assets could include contributions for charity care, reflecting donations to the hospital for the provision of charity care, and net realized and unrealized gains on investments, reflecting an increase in the value of the investment (unrealized until sold and realized if sold). Net assets released from restrictions includes money previously restricted by donors that has become available for use. Subcategories for permanently restricted net assets could include contributions for endowment funds, reflecting donations with permanent restrictions on the principal and interest, as well as net realized and unrealized gains on investments, representing an increase in value of the investment and an increase in cash.

The final total changes in net assets is the difference between total net assets at the beginning of the year and total net assets at the end of the year. In exhibit 3.2, this line shows an increase in Bobcat Hospital’s total net assets.

**Statement of Cash Flows**

The statement of cash flows shows the organization’s cash flow—that is, the amounts of cash receipts and where they came from and the amounts of cash disbursements and where they went during the statement period (see exhibit 3.3). In a not-for-profit organization, the statement is divided into cash flow from operations, cash flow from investments, and cash flow from financing, including restricted income and contributions. For-profit organizations do not divide the cash flows into categories, but the bottom line is the same—net increase (decrease) in cash.\(^3\)

Cash flow from operating activities begins with the change in net assets (this figure comes from the statement of changes in net assets or is computed from the difference in total net assets between statement periods) and then includes the changes in cash between statement periods for providing patient care services. Information from the statement of operations was prepared using accrual accounting, as required by GAAP. This means that revenues were recorded when the services were billed, not when the bills were paid. Expenses were recorded when they contributed to operations, not when they were paid. Revenues and expenses must be adjusted as well as noncash events, such as depreciation. The remainder of this section of the statement of cash flows makes the necessary adjustments.

Cash flow from investing activities includes the changes in cash between statement periods for investing in fixed assets, such as property and equipment, and for selling fixed assets. Cash flow from financing activities includes the changes in cash between statement periods for financing activities—such as debts, endowments, grants, and transfers—to and from parent organizations.

Net increase (decrease) in cash for the year is computed by adding the net cash from operating, investing, and financing activities.
### Cash flow from operating activities

Excess of revenues over expenses for the year $93

Adjustments to reconcile change in net assets to net cash

Add:
- Depreciation expense 471
- Decrease in prepaid expense 8
- Increase in notes payable 10
- Increase in accrued expenses payable 265
- Increase in current portion of long-term debt 6

Less:
- Increase in temporary investments (15)
- Increase in patient accounts receivable (net of allowance for doubtful accounts) (676)
- Increase in inventory (35)
- Decrease in accounts payable (68)
- Decrease in deferred revenues (5)
- Decrease in estimated third-party adjustments (87)

Net cash flow from operating activities (33)

### Cash flow from investing activities

Purchasing of property, plant, and equipment (400)

Proceeds from sale of long-term investments 181

Purchase of other noncurrent assets (4)

Net cash flow from investing activities (223)

### Cash flow from financing activities

Proceeds from issuance of long-term debt 100

Net cash flow from financing activities 100

Net increase (decrease) in cash for the year (156)

Add: Cash balance at January 1 280

Cash balance at December 31 $124

---

**Explanatory Notes to the Financial Statements**

Explanatory notes for the balance sheet and the other financial statements should identify extraordinary events, as well as certain required provisions, and should be presented following the financial statements. In fiscal years beginning after December 15, 2021, private organizations and private not-for-profit organizations will be expected to present the effects of all leases on the balance sheet (FASB 2020). ASU 2016-02, Leases (Topic 842) intends to increase transparency and comparability among organizations by requiring all organizations, not just healthcare organizations, to present the effects of...
both financial leases and operating leases on the balance sheet (historically, organizations have not presented the effects of operating leases on the balance sheet). The organization should recognize a liability (lease payments) and a right-of-use asset on the balance sheet (Connor and Mosrie 2016).

An example of explanatory notes to financial statements is presented in exhibit 3.4, in reference to the statement of cash flows shown earlier in exhibit 3.3.

**EXHIBIT 3.4**

Bobcat Hospital
Notes to Financial Statements, 2020

1. **Organization and Nature of Operations**
   Bobcat Hospital is a 120-bed, nonprofit hospital offering the following services: inpatient, outpatient, emergency, long-term, rehab, and home care.

2. **Community Benefit and Charity Care**
   Bobcat Hospital provides healthcare services through various programs that are designed to enhance the health of the community. Bobcat Hospital provides emergent and urgent care to persons who cannot afford health insurance because of inadequate financial resources. Bobcat Hospital's financial assistance policy provides care to patients regardless of their ability to pay, and all uninsured patients are eligible for discounts based on their income up to 400% of the federal poverty level. The amount of charity care provided is based on this policy, and the cost of charity care is calculated based on the charges for such services multiplied by the hospital's cost-to-charges ratio. The cost of charity care provided in 2020 was $420,000, and the amount for 2019 was $408,000. Not included in this amount, but still considered a community benefit, is the loss to the Medicaid program.

3. **Net Patient Services Revenue**
   Patient services revenue is reported at estimated net realizable amounts for services rendered. The amount is net of provisions for explicit price concessions of $3,703,200 for 2020 and $3,592,800 for 2019. Provisions for contractual allowances recognized discounts provided based on agreements with Medicare, Medicaid, other government programs, and major insurance companies. Net patient service revenue is also net of implicit price concessions of $925,800 for 2020 and $898,200 for 2019. Provisions for implicit price concessions recognized discounts to patients without an agreement with Bobcat Hospital were most likely classified as bad debt in previous accounting periods.

4. **Bad Debt**
   The amount of bad debt is based on the current GAAP principle of revenue recognition that recognizes bad debt only if Bobcat Hospital expected to collect the amount billed to the patient and only for patients who had an adverse event such as bankruptcy or loss of employment. The amount recognized as bad debts in 2020 was $600,000 based on charges, and the amount for 2019 was $500,000 based on charges.
RATIO ANALYSIS

Ratio analysis, as defined in chapter 1, is a quantitative method of determining an organization’s financial performance by computing the relationships of important line items in the financial statements.

A ratio is a comparison between two or more financial relationships, such as income to assets or assets to liabilities. Ratios are useful because they help an organization compare a period’s results to previous periods or to the results of other, similar organizations.

Ratios emerge from facts located on the financial statements, which report an organization’s financial position at a point in time and its financial operations over a period of time. Investors and creditors analyze financial statements, primarily through ratio analysis, to predict future earnings and the ability to service debt. Managers use ratio analysis to predict the future and to plan strategies that will influence the future. Financial statement analysis concentrates on four classifications of ratios: liquidity, profitability, asset efficiency, and capital structure (see exhibit 3.5 for Optum medians for all hospitals reporting in 2018 for 2016 fiscal years).

### Exhibit 3.5
Selected Hospital Financial Ratios, Optum Median 2016

<table>
<thead>
<tr>
<th>Ratios</th>
<th>Optum Medians, 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Liquidity</strong></td>
<td></td>
</tr>
<tr>
<td>Current ratio</td>
<td>2.17</td>
</tr>
<tr>
<td>Collection period</td>
<td>47.50</td>
</tr>
<tr>
<td>Days cash on hand, all sources</td>
<td>101.40</td>
</tr>
<tr>
<td>Days cash on hand, short-term sources</td>
<td>42.60</td>
</tr>
<tr>
<td>Average payment period</td>
<td>56.40</td>
</tr>
<tr>
<td><strong>Profitability</strong></td>
<td></td>
</tr>
<tr>
<td>Operating margin (%)</td>
<td>.46</td>
</tr>
<tr>
<td>Total margin (%)</td>
<td>3.72</td>
</tr>
<tr>
<td>Return on net assets (%)</td>
<td>5.00</td>
</tr>
<tr>
<td><strong>Asset efficiency</strong></td>
<td></td>
</tr>
<tr>
<td>Total asset turnover</td>
<td>.98</td>
</tr>
<tr>
<td>Average age of plant (years)</td>
<td>11.79</td>
</tr>
<tr>
<td>Fixed asset turnover</td>
<td>2.50</td>
</tr>
<tr>
<td>Current asset turnover</td>
<td>3.25</td>
</tr>
<tr>
<td>Inventory turnover</td>
<td>59.53</td>
</tr>
<tr>
<td><strong>Capital structure</strong></td>
<td></td>
</tr>
<tr>
<td>Net asset financing (%)</td>
<td>51.70</td>
</tr>
<tr>
<td>Long-term debt to capitalization</td>
<td>27.80</td>
</tr>
<tr>
<td>Debt service coverage</td>
<td>3.06</td>
</tr>
<tr>
<td>Cash flow to debt (%)</td>
<td>17.30</td>
</tr>
</tbody>
</table>

Source: Adapted from Optum (2018). Used with permission.
Liquidity Ratios

Liquidity ratios are ratios that measure an organization’s ability to meet short-term obligations. Measuring an organization’s ability to meet short-term obligations is important in evaluating an organization’s financial performance.

- **Current Ratio**

\[
\text{Current Ratio} = \frac{\text{Total current assets}}{\text{Total current liabilities}}
\]

The current ratio is the basic indicator of financial liquidity, which is an organization’s ability to meet its obligations. It is nondirectional; higher values mean better debt-paying capacity, but a ratio that is too high may mean that the organization could invest excess current assets more wisely. The primary disadvantage of the current ratio is that it does not take into account the relative liquidity of the particular types of current assets. However, the current ratio was trending higher from 2011 to 2016, indicating an improvement in hospitals’ management of their liquidity.

- **Collection Period**

\[
\text{Collection Period} = \frac{\text{Net receivables}}{\text{Net patient services revenue} / 365}
\]

The collection period is also called days in accounts receivable and is a measure of how long the average patient (or payer) takes to pay the bill after discharge. It is directional; higher values indicate that the organization is collecting its bills slowly, which may indicate liquidity problems; lower values indicate more rapid collections, which lead to more available cash. The collection period ratio was trending steady from 2011 to 2016, with some variability between states, probably as a result of Medicaid payment delays in some states.

- **Days Cash on Hand, All Sources**

\[
\text{Days Cash on Hand, All Sources} = \frac{\text{Cash + Temporary investments + Unrestricted long-term investments}}{(\text{Total expenses} - \text{Depreciation expenses}) / 365}
\]

Days cash on hand, all sources is a measure of how long an organization could meet its obligations if cash, temporary investments, and unrestricted long-term investments were discontinued. Higher values indicate short-term liquidity. The days cash on hand, all sources, showed variability for the period from 2011 to 2016.
• Days Cash on Hand, Short-Term Sources

\[
\text{Days cash on hand, short-term sources} = \frac{\text{Cash + Temporary investments}}{(\text{Total expenses} - \text{Depreciation expenses}) / 365}
\]

Days cash on hand, short-term sources is a measure of how long an organization could meet its obligations from cash and temporary investments. Higher values indicate short-term liquidity. The days cash on hand, short-term sources, showed variability for the period from 2011 to 2016.

• Average Payment Period

\[
\text{Average payment period} = \frac{\text{Total current liabilities}}{(\text{Total expenses} - \text{Depreciation expenses}) / 365}
\]

Average payment period is a measure of how long the organization takes to pay its obligations. Lower values indicate liquidity and are preferable. The average payment period data from audited financial statements for the period from 2011 to 2016 was trending higher, though the average payment period data from Medicare cost reports was trending steady.

### Profitability Ratios

Profitability ratios reflect an organization’s ability to exist and grow by measuring the relationship of revenues to expenses. Profitability is a double-edged sword for not-for-profit healthcare organizations in that too much profit brings criticism from the community (and possibly the Internal Revenue Service) and too little profit brings criticism from the governing body.

• Operating Margin

\[
\text{Operating margin} = \frac{\text{Operating income}}{\text{Total operating revenue}} \times 100
\]

Operating margin is operating income divided by total operating revenue and reflects profits from only operations. Higher values indicate profitability. The operating margin has been was trending downward from 2011 to 2016, indicating declining profitability from operations.

• Total Margin

\[
\text{Total margin} = \frac{\text{Excess of revenues over expenses}}{\text{Total operating revenue}} \times 100
\]
Total margin is the excess of revenues over expenses divided by total operating revenue and reflects profits from both operations and nonoperations (typically investment income). Higher values indicate profitability. The total margin was trending downward from 2011 to 2016, indicating not only a possible decline in profitability from operations but also declines in investment income.

- **Return on Net Assets**

\[
\frac{\text{Excess of revenues over expenses}}{\text{Net assets}} \times 100
\]

Return on net assets (or equity for for-profit organizations) is the basic measure of profit in relationship to investment. Higher values reflect profitability. Consistent with the trends of both operating margin and total margin, return on net assets was trending downward from 2011 to 2016.

**Asset Efficiency Ratios**

Asset efficiency ratios reflect an organization’s ability to be efficient by measuring the relationship between revenue and assets. For purposes of these ratios, total revenue includes net nonoperating gains.

- **Total Asset Turnover**

\[
\frac{\text{Total operating revenue} + \text{Other income}}{\text{Total assets}}
\]

Total asset turnover is the basic measure of how efficiently an organization is using its assets in relation to generating revenue. Higher values usually indicate higher efficiency. The total asset turnover was trending steady from 2011 to 2016; however, older facilities with assets that are mostly depreciated may appear to be efficient because of a low numerator. Calculating the average age of plant ratio indicates whether an older facility is causing a high total asset turnover ratio.

- **Average Age of Plant**

\[
\frac{\text{Accumulated depreciation}}{\text{Depreciation expense}}
\]
Average age of plant is the basic measure of the average age of the organization’s fixed assets expressed in years assuming the organization is using straight-line depreciation. Lower values are preferable and indicate a newer fixed asset base. Average age of plant was trending higher from 2011 to 2016, indicating aging fixed assets.

- **Fixed Asset Turnover**

  \[
  \text{Fixed asset turnover} = \frac{\text{Total operating revenue + Other income}}{\text{Net fixed assets}}
  \]

  Fixed asset turnover is a subset of the total asset turnover in that it measures how efficiently an organization is using its fixed assets (usually land, plant, and equipment) in relation to generating revenue. Higher values indicate higher efficiency. Fixed asset turnover was trending higher from 2011 to 2016 after trending downward during the five years before that period.

- **Current Asset Turnover**

  \[
  \text{Current asset turnover} = \frac{\text{Total operating revenue + Other income}}{\text{Total current assets}}
  \]

  Current asset turnover measures how efficiently an organization is using its current assets in relation to generating revenue. Higher values indicate higher efficiency and can be obtained by increasing revenue proportionately more than current assets or by decreasing current assets proportionately more than total revenue. Current asset turnover trended inconsistently during the period from 2011 to 2016.

- **Inventory Turnover**

  \[
  \text{Inventory turnover} = \frac{\text{Total operating revenues + Other income}}{\text{Inventory}}
  \]

  Inventory turnover measures the number of times an organization turns over its inventory relative to total operating revenue and other income. Low values usually indicate overstocking. Inventory turnover was trending higher from 2011 to 2016, with the exception of 2015, in which there were declines in hospital revenue related to the Affordable Care Act–mandated reductions in Medicare payments to hospitals.
Capital Structure Ratios

Capital structure ratios reflect the organization’s long-term liquidity by measuring a variety of relationships to capital. Capital structure ratios are used by banks and bond rating agencies to determine creditworthiness.

- **Net Asset Financing**

\[
\text{Net asset financing} = \frac{\text{Net assets}}{\text{Total assets}} \times 100
\]

Net asset financing (or equity financing for for-profit organizations) measures the relationship between assets owned by the organization (i.e., assets minus liabilities) and total assets. This ratio is nondirectional; higher values are usually preferable. However, high-performing hospitals use debt financing, which lowers this ratio, but not excessively. Net asset financing was trending slightly lower from 2011 to 2016.

- **Long-Term Debt to Capitalization**

\[
\text{Long-term debt to capitalization} = \frac{\text{Long-term debt}}{\text{Long-term debt} + \text{Net assets}} \times 100
\]

Long-term debt to capitalization measures the relationship between long-term debt and assets owned by the organization. Lower values are preferable, whereas higher values imply a greater reliance on debt financing and may indicate a reduced ability to take on additional debt. Long-term debt to capitalization was trending steady from 2011 to 2016, with a slight increase in 2016, possibly to finance government mandates such as the electronic health record.

- **Debt Service Coverage**

\[
\text{Debt service coverage} = \frac{\text{Excess of revenues over expenses} + \text{Depreciation expense} + \text{Interest expense}}{\text{Debt principal payment} + \text{Interest payments}}
\]

Debt service coverage measures the ability to meet long-term debt obligations. Higher values indicate an organization’s ability to meet long-term debt obligations. Principal payments are found as payments on long-term debt on the statement of cash flows. Debt service coverage was trending lower from 2011 to 2014 but then showed some increase in 2015 and 2016.
Cash Flow to Debt

\[
\frac{\text{Excess of revenues over expenses + Depreciation expense}}{\text{Current liabilities + Long-term debt}} \times 100
\]

Cash flow to debt measures the ability to meet both short-term and long-term obligations. Higher values indicate an organization’s ability to meet both short-term and long-term obligations, and lower values indicate a possible problem in meeting long-term obligations. Cash flow to debt was trending lower from 2011 to 2016.

**Performance Indicators**

GAAP requires performance measures such as net income for not-for-profit organizations and earning per share for for-profit organizations. However, most companies including healthcare organizations also include non-GAAP performance measures in financial reports to financial stakeholders. Although doing so is not prohibited, FASB has indicated concern that non-GAAP performance measures might mislead or confuse financial stakeholders (Golden 2017).

**Average Length of Stay**

\[
\frac{\text{Patient days}}{\text{Discharges}}
\]

The average length of stay (ALOS) measures how long patients stay in the hospital on average. Because a high percentage of hospital patients either reimburse the hospital per case
or are on a capitated arrangement, lower ALOSes that hold down costs are preferable. However, hospital management should be aware of the incremental costs associated with keeping patients longer before developing rigorous discharge policies to lower their ALOS. Median ALOS for all hospitals reporting to Optum (2018) for 2016 was 4.20, trending steady from 2011 to 2016.

- **Occupancy Rate**

\[
\text{Patient days} = \frac{365 \times \text{Licensed beds}}{\text{Occupancy rate}}
\]

*Occupancy rate* measures capacity, or the percentage of the hospital that is being used. Higher values are typically preferable unless a large portion of the hospital’s business is represented by capitation agreements. The median occupancy rate for all hospitals reporting to Optum (2018) for 2016 was 49.3, trending slightly lower from 2011 to 2016.

**Financial Analysis and Annual Reports**

For-profit organizations prepare *annual reports*, which include financial and other information, and send them to their stockholders. Only recently have not-for-profit organizations begun to prepare annual reports as a vehicle of communication and accountability to the community.

There are several principles for preparing good reports, including annual reports:

◆ **Audience and purpose**: Management should prepare reports with the audience and purpose as the central focus. Preparing reports that readers will not understand is always dangerous. For instance, executive management should use a different level of detail in preparing a report for department managers than in preparing a report for the governing body. In addition to audience, management should always keep in mind the primary reason for the report. For instance, annual reports for for-profit organizations that have selling stock as a primary purpose will attract attention by using lots of color. Not-for-profit organizations, which must be more concerned about costs incurred, should provide an austere, yet functional, annual report.

◆ **Timeliness**: Reports designed to provide control within the organization, such as budget reports, must be prepared and distributed in a timely manner to maximize the effects of any necessary corrective action.

◆ **Accuracy**: Accuracy in reporting information is more important than timeliness. Reports with mistakes are detrimental to the organization because they create credibility problems.
Clarity: Reports should be clear and concise to the audience and should leave little room for misinterpretation.

Comparability: Reports should maintain formats to accommodate easy comparisons from statement period to statement period and among different organizations.

Commentary: Reports should provide explanations when necessary. Even financial statements should provide explanations in the form of notes to the financial statements.

Meaningfulness: Reports should be used for better decision making, which can only happen if the information is needed by the decision maker.

Annual reports provide accountability of the organization to the stockholders and act as a vehicle to sell more stock.

**Chapter Key Points**

Financial analysis includes three steps: (1) establish the facts about the organization, (2) compare facts about the organization over time and with facts about similar organizations, and (3) use perspective and judgment to make decisions regarding the comparisons.

The balance sheet represents the organization's assets, liabilities, and net assets.

The statement of operations summarizes the organization's net revenues, expenses, and excess of net revenues over expenses.

The statement of changes in net assets is the equity in a for-profit organization.

The statement of cash flows categorizes an organization's cash flows.

Ratio analysis compares facts about an organization over time and compares this information with facts about similar organizations.

Performance indicators measure the organizational performance in relation to operations.

**Discussion Questions**

1. How would you explain the three steps in financial analysis at the organizational level?
2. What is the purpose of creating a balance sheet? List the three general classifications of the balance sheet and possible categories under these classifications.
3. What is the purpose of the statement of operations? List the main classifications and the possible categories under the classifications.

4. What types of organizations use the statement of changes in net assets, and why?

5. What is the statement of cash flows? The statement is divided into three segments; list each category.

6. What are the four classifications of ratios on which the financial statement analysis focuses?

7. What are the performance indicators used to analyze the financial performance of an organization?

8. What must an annual report include to be considered a good report?

Notes

1. Acquiring ratio, trend, and percentage data on specific competitors may be impossible. However, several services sell data in the aggregate for comparable organizations, and some data are published by Moody’s Investors Service, Dun & Bradstreet, and Troy.

2. In the 1996 AICPA Audit and Accounting Guide for Health Care Organizations, the term “net assets” replaced the term “fund balance” in not-for-profit healthcare organizations for external reporting purposes. Prior to 1996, not-for-profit organizations established numerous self-balancing funds consisting of assets, liabilities, and fund balances. AICPA, and more specifically Financial Accounting Standards Board (FASB) Statement No. 117, concluded that some not-for-profit organizations did not always present information about the fund balances on external reports. Although the AICPA and FASB Statement No. 117 do not preclude not-for-profit healthcare organizations from using fund accounting for internal reporting purposes, since 1996 those organizations have been required to classify all fund balances into three broad categories and report the categories on the balance sheet.

3. Statements of cash flows can be prepared using either the indirect method or the direct method. The indirect method of computing cash flows is based on accrual accounting changes in various assets and liabilities. The direct method is based on the actual changes in cash accounts for revenues and expenses. The direct method, which is recommended by FASB Statement No. 95, focuses on the primary sources of cash, such as patients and third-party payers, and uses of cash, such as salaries and supplies. The computation of the direct method is a complex process because of the number of accruals in each line item. In fiscal years beginning after December 15, 2017, organizations may present cash flow using either the direct or the indirect method (Connor and Mosrie 2016).
REFERENCES


Conner, B. 2020. Substantive review and e-mail correspondence with author. February 2.


**Ratio Analysis**

*Ratio Analysis Practice Problem*

Using the financial statements for Bobcat Hospital in chapter 3, calculate the following ratios for 2019:

- Current ratio
- Collection period ratio
- Days cash on hand, all sources, ratio
- Days cash on hand, short-term sources, ratio
- Average payment period ratio
- Operating margin ratio
- Total margin ratio
- Return on net assets ratio
- Total asset turnover ratio
- Average age of plant ratio
- Fixed asset turnover ratio
- Current asset turnover ratio
- Inventory ratio
- Net asset financing ratio
- Long-term debt capitalization ratio
- Debt service coverage ratio
- Cash flow to debt ratio
**Ratio Analysis Practice Problem Solution**

**Current ratio**

$$\frac{\text{Total current assets}}{\text{Total current liabilities}} = \frac{\$3,350}{\$1,728} = 1.939$$

**Collection period ratio**

$$\frac{\text{Net receivables}}{\text{Net patient service revenue}/365} = \frac{\$2,860}{\$8,119/365} = 128.597$$

**Days cash on hand, all sources, ratio**

$$\frac{\text{Cash} + \text{Temporary investments} + \text{Unrestricted long-term investments}}{\text{(Total expenses – Depreciation expenses)/365}} = \frac{\$280 + \$30 + \$790}{(\$8,286 – \$443)/365} = 51.191$$

**Days cash on hand, short-term sources, ratio**

$$\frac{\text{Cash} + \text{Temporary investments}}{\text{(Total expenses – Depreciation expense)/365}} = \frac{\$280 + \$30}{(\$8,286 – \$443)/365} = 14.427$$

**Average payment period ratio**

$$\frac{\text{Total current liabilities}}{\text{(Total expenses – Depreciation expense)/365}} = \frac{\$1,728}{(\$8,286 – \$443)/365} = 80.417$$

**Operating margin ratio**

$$\frac{\text{Operating income}}{\text{Total operating revenue}} \times 100 = \frac{\$280}{\$8,566} \times 100 = 3.269\%$$
### Total margin ratio

\[
\text{Total margin ratio} = \frac{\text{Excess of revenues over expenses}}{\text{Total operating revenue}} \times 100 = \frac{365}{8,566} \times 100 = 4.261\%
\]

### Return on net assets ratio

\[
\text{Return on net assets ratio} = \frac{\text{Excess of revenue over expenses}}{\text{Total net assets}} \times 100 = \frac{365}{4,342} \times 100 = 8.406\%
\]

### Total asset turnover ratio

\[
\text{Total asset turnover ratio} = \frac{\text{Total operating revenue} + \text{Other income}}{\text{Total assets}} = \frac{8,566 + 85}{9,570} = 0.904
\]

### Average age of plan ratio

\[
\text{Average age of plan ratio} = \frac{\text{Accumulated depreciation}}{\text{Depreciation expense}} = \frac{1,259}{443} = 2.842
\]

### Fixed asset turnover ratio

\[
\text{Fixed asset turnover ratio} = \frac{\text{Total operating revenue} + \text{Other income}}{\text{Net fixed assets}} = \frac{8,566 + 85}{6,220} = 1.391
\]

### Current asset turnover ratio

\[
\text{Current asset turnover ratio} = \frac{\text{Total operating revenue} + \text{Other income}}{\text{Total current assets}} = \frac{8,566 + 85}{3,350} = 2.582
\]

### Inventory turnover ratio

\[
\text{Inventory turnover ratio} = \frac{\text{Total operating revenue} + \text{Other income}}{\text{Inventory}} = \frac{8,566 + 85}{140} = 61.793
\]
Net assets financing ratio

\[
\frac{\text{Total net assets}}{\text{Total assets}} \times 100 = \frac{\$4,342}{\$9,570} \times 100 = 45.371\%
\]

Long-term debt to capitalization

\[
\frac{\text{Long-term debt}}{\text{Long-term debt + Net assets}} \times 100 = \frac{\$3,500}{\$3,500 + \$4,342} \times 100 = 44.631\%
\]

Debt service coverage ratio

\[
\frac{\text{Excess of revenues over expenses + Interest expense + Depreciation}}{\text{Interest + Principal payments}} = \frac{\$365 + \$109 + \$443}{\$109 + \$69} = 5.152
\]

Note: \$178 – \$109 = \$69

Cash flow to debt ratio

\[
\frac{\text{Excess of revenues over expenses + Depreciation}}{\text{Current liabilities + Long-term debt}} \times 100 = \frac{\$365 + \$443}{\$1,728 + \$3,500} \times 100 = 15.455\%
\]


**Ratio Analysis Self-Quiz Problem**

Using the financial statements for Bobcat Hospital in chapter 3, calculate the following ratios for 2020 and indicate whether they are better or worse than the 2019 ratios. Indicate whether the 2020 ratios are better or worse than the benchmarks using the Optum medians for each ratio (see exhibit 3.5):

- Current ratio
- Collection period ratio
- Days cash on hand, all sources, ratio
- Days cash on hand, short-term sources, ratio
- Average payment period ratio
- Operating margin ratio
- Total margin ratio
- Return on net assets ratio
- Total asset turnover ratio
- Average age of plant ratio
- Fixed asset turnover ratio
- Current asset turnover ratio
- Inventory ratio
- Net asset financing ratio
- Long-term debt to capitalization ratio
- Debt service coverage ratio
- Cash flow to debt ratio