

Financial Management in Health Care Organizations

HSCC 450

Week 2

Lecture 2

Chapter 4: Organizational Diagnostics:
Financial Statement Analysis

Objectives

- Use an organization's financial statements to evaluate:
 - Past liquidity
 - Past asset utilization
 - Past financial leverage (capital structure and debt service coverage)
 - Past profitability
- Make recommendations to management on how to improve diagnosed deficiencies in liquidity, asset utilization, leverage, and profitability

Key Terms

- Asset/equity ratio
- Capital structure
- Cash flow coverage
- Collection period
- Common-size statement
- Coverage ratio
- Financial leverage
- Financial statement analysis
- Inventory turnover ratio
- Liquidity
- Long-term debt to equity
- Performance (asset utilization)
- Profitability
- Ratio analysis
- Return on assets (ROA)
- Return on equity (ROE)
- Times interest earned
- Total asset turnover
- Total margin

Using Financial Statements (1/4)

- Managers:
 - How the organization is doing?
 - What is the rate of profit?
 - Is inventory and accounts receivables being used efficiently?
- Board of Directors:
 - What is the organizations profitability?
 - Is the mix of debt to equity financing appropriate?
 - What is the quarter-to-quarter variability of revenues?

Using Financial Statements (2/4)

- Others outside the organization can use the financial statements, too:
 - Lenders:
 - Can the interest and principle be paid on time?
 - Equity owners:
 - Will there be money to reinvest after obligations are met?

Using Financial Statements (3/4)

- In the health care setting, regulators and third-party payors want to know what rate of profitability their rules and rates of reimbursement offer to providers

Using Financial Statements (4/4)

- As previously stated, health care financial statements are compiled differently than other industries.
 - The differences in accounting procedures require the financial analyst to compute some ratios differently for health care organizations.
 - Failure to recognize those differences will result in misunderstanding by the analyst and those who use that analyst's information.

Financial Statement Analysis: Power & Limitations (1/2)

- Does summarize all of the organization's transactions with outside parties during the reporting period
 - Properly analyzed the statements can reveal about the financial health & performance of the organization
- Does not "tell all" about the financial health & performance of the organization.
 - Statement analysis is for a specific reporting period in the P-A-S-T.
 - The relevant economic conditions for the reporting period must be accounted for

Financial Statement Analysis: Power & Limitations (2/2)

- Financial statement analysis is only as good as the financial statements and the accounting practices on which it is based.
 - Practice!

A First Approach: Common-Size Statements (1/1)

- Refer to page 62-64, figure 4-1
- The bottom line net income for 2000 (page 64) is \$302 million
 - Is this enough to meet all obligations?
 - Is that an excessive amount?
 - These questions can only be answered if the net income is put into an appropriate context

A First Approach: Common-Size Statements (2/5)

- Reasonable conclusions regarding the financial performance of an organization, requires the financial statement data to be *normalized*
 - One such method is to construct a common-size statement
 - Each of the items in the statement is presented as a percentage of some base

A First Approach: Common-Size Statements (3/5)

- Balance sheet items are shown as percentages of total assets
- Income statement items are shown as percentages of total revenue
- Cash flow statement items are shown as percentages of net change in cash
 - The term *common-size* reflects the fact that, on the balance sheet, for example total assets are a common size – 100% for every organization

A First Approach: Common-Size Statements (4/5)

- Table 4-1 shows the common-size statements for Tenet Healthcare Corporation for 2000
 - Using common-size statements, comparison for Tenet's net income, as a percent of total revenue, to that of any corporation
 - Composition of assets and liabilities can also be made
 - The example in the text illustrates more than 19% of total assets are in the form of accounts receivable
 - $(2506/13161) \times 100 = 19.041\%$

A First Approach: Common-Size Statements (5/5)

- Financial analysts find common-size statements interesting, but are seldom used
 - The more useful tools are ratio analysis

Ratio Analysis (1/5)

- Ratio analysis consist of computing ratios, one number divided by another, from an organization's financial statements and comparing those ratios to the average for some relevant comparison group or to some ideal or standard.
 - WOW! Essentially, in is similar to computing a drug dose calculation using the ratio & proportion method
 - Do not be scared!

Ratio Analysis (2/5)

- Why ratios?
 - Ratios provide 4 dimensions of organization performance
 - Liquidity
 - Performance or asset utilization
 - Financial leverage
 - Profitability

Ratio Analysis (3/5)

- Liquidity relates to how quickly can an organization raise cash to meet short-term obligations
- Performance or asset utilization indicates how well the organization is using it's assets to generate revenue

Ratio Analysis (4/5)

- Financial leverage indicates how well the organization is using other people's money
 - Capital structure ratios demonstrate the extent the organization has borrowed
 - Coverage ratios show to what extent the organization can meet the financial obligations (interest and principle) it has incurred by borrowing

Ratio Analysis (5/5)

- Profitability ratios provide information about the extent to which the organization can reward shareholders or can provide services to stakeholders

Liquidity (1/4)

- Like most things, liquidity to a certain extent is a good thing.
 - Liquidity is relative, that is, the size of the current obligations, as well as on its current assets

Liquidity (2/4)

- Assets which can be turned into cash quickly are easily spotted on the financial statements
 - For example, current assets are considered to be liquid assets
 - Cash
 - Marketable securities
 - Accounts receivable
 - Prepaid expenses

Liquidity (3/4)

- Current liabilities (denominator) of any liquidity measure are:
 - Accounts payable
 - Wages & salaries payable
 - Taxes payable
 - Portion of the principle of long-term debt due within the year

Liquidity (4/4)

- The current ratio, most common liquidity ratio, is defined as the dollar value of current assets divided by current liabilities
 - Based on Tenet's financial statements, the current ratio for 2000 is 1.9
 - Current assets = 3594
 - Current liabilities = 1912
 - Current ratio = 1.87 or 1.9
 - In order to determine if this is a good ratio, the current ratio must be compared to other organizations of similar size offering similar services

Asset Utilization Ratios (1/6)

- This ratio provides information about how effectively the organization is using assets to generate revenues and cash
 - Many of these ratios fall under the category of turnover ratios
 - Inventory ratio shows how many times, on average, the organization's total volume of inventory turns over, or changes during an accounting period

Asset Utilization Ratios (2/6)

- The turnover ratio is calculated as total revenues plus net non-operating gains divided by ending inventory
 - High values indicate a small investment in inventory is generating a large volume of sales (this is a good thing!)
 - The turnover ratio is not too effective for hospitals
 - It is a good indicator for pharmacies, medical suppliers, and the like

Asset Utilization Ratios (3/6)

- The total asset turnover is a more useful tool for healthcare providers
 - Total revenue plus non-operating gains divided by total assets
 - Like the turnover ratio, a high value indicates effective revenue generation from the asset base

Asset Utilization Ratios (4/6)

- To evaluate Tent's total asset turnover for 2000:
 - Operating revenues: 11414
 - Total assets: 13161
 - Total asset turnover: 0.8675
 - Acute care facilities can expect a total asset turnover ratio of about 1.00

Asset Utilization Ratios (5/6)

- The ability to turn accounts receivable into cash is another indicator of performance
 - The collection period (days in accounts receivable) indicates the average time accounts receivable remain uncollected.
 - The longer the accounts receivable goes unpaid, the greater the financial strain on the organization

Asset Utilization Ratios (6/6)

- To calculate the ratio, first divide patient service revenue for the period by 365 (determines revenue per day)
 - Divide this quotient *into* net patient accounts receivable to determine the average time (days) needed to collect each patient's account
 - Tenet's collection period for 2000 was 80.14 days
 - Payments from Medicare/Medicaid average 60 – 90 days
 - HMO & other similar health insurers average 30 days

Leverage Ratios (1/8)

- The two important aspects of financial leverage are:
 - First, it involves a choice of the mix of debt and equity financing
 - The result of that choice determine the organizational capital structure
 - Second, financial leverage involves a choice of how much interest to pay

Leverage Ratios (2/8)

- There are 2 types of leverage ratios
 - Capital structure ratios
 - Coverage ratios

Leverage Ratios (3/8)

- The most useful and basic leverage ratio is the asset/equity ratio, also known as the asset-to-equity ratio
 - The ratio is defined as total assets divided by owner's equity (or, in not-for-profit, net assets)
 - The 2000 asset/equity ratio for Tenet is $13161/4066 = 3.24$
 - Based on the above calculation every \$1 controlled \$3.24 of total assets

Leverage Ratios (4/8)

- To the extent that assets are held in excess of the value of equity (or fund balance), the organization incurred debt.
 - An asset/equity ratio > 1.00 indicates the organization has gone into debt
 - If the organization can meet its obligations, the use of debt financing increases the return to equity holders

Leverage Ratios (5/8)

- Long-term debt/equity ratio is another useful leverage ratio
 - The long-term debt/equity ratio for Tenet in 2000 was 1.3940
 - Long-term debt, net of current portion is found on page 62 under "Liabilities and Shareholders' Equity" (5668)
 - Likewise for "Total shareholders' equity" (4066)
 - 5668 divided by 4066 equals 1.3940
 - Again > 1.00 indicates "debt"

Leverage Ratios (6/8)

- To respond to the question, "How many times your interest obligation did you earn?" (or, did you cover the expense of borrowing the money)
 - The ratio is defined as $(\text{net income} + \text{interest expense} + \text{income tax})$ divided by interest expense
 - This ratio is referred to as *earnings before interest and taxes (EBIT)*

Leverage Ratios (7/8)

- The obvious denominator is "interest expense"
 - The numerator is not as clear
 - Net income is profit that was available, but was not necessary, to meet interest payments
 - Cash used to pay the interest expense was available
 - Interest is an income tax-deduction
 - Other resources were used to pay income tax were potentially available
 - Therefore, EBIT is the best measure to account for profits

Leverage Ratios (8/8)

- Tenet's 1999 times interest earned is 2.2109
 - Most analyst agree an EBIT 3.00 to be a "safe" number
- Cash flow coverage may be a better ratio
 - EBITDA/interest expense yields cash flow coverage
 - The flow of cash available to meet obligations

Profitability Ratios (1/6)

- Profits go by many names:
 - Net income
 - Net earnings
 - Excess of revenues over expenses
 - Overage (?)
 - In accrual terms, profits are the resources the organization generated above those required to meet its obligations

Profitability Ratios (2/6)

- Several ratios provide information about profitability
 - The most often used is total margin, which is the ratio of profit to the sum of revenues and non-operating gains
 - Ratio indicates the amount of profit earned per dollar of revenue
 - Has no indication regard the return to equity holders (ROE)

Profitability Ratios (3/6)

- Return on assets (ROA), often called return on investments is profit divided by total assets
 - The ROA measures the amount of profit per dollar of assets in place and indicates the ability of the organization to pay a return to its investors

Profitability Ratios (4/6)

- A third profitability ratio used is the return on equity (ROE)
 - $ROE = \text{Net after-tax income} / \text{Owners' equity}$
- $ROE = (\text{net after-tax income} / \text{Total assets}) \times (\text{Total assets} / \text{Owner's equity})$
 - The above equation shows that ROE consist of ROA, therefore one of the effects of financial leverage is to multiply a modest ROA into a larger ROE

Profitability Ratios (5/6)

- The ROA component of the ROE can be further decomposed (manipulated) as follows:
- $ROE = (\text{Pretax income} / \text{Revenues}) \times (\text{Revenues} / \text{Total Assets}) \times (1 - \text{Tax rate}) \times (\text{Total assets} / \text{Owners' equity})$
 - OR
 - $ROE = (\text{Pretax margin}) \times (\text{total asset turnover}) \times (\text{tax retention rate}) \times (\text{asset} / \text{equity})$

Profitability Ratios (6/6)

- WOW! What a mouthful?
 - Essentially, the organization's ability to reward shareholders depends on its ability to price services to earn a pretax margin, its ability to use assets to generate revenue, its tax burden, and its financial leverage.

Summary

- No need to repeat the information found on page 75!