Analysis of Financial Statements

Overview

Financial statement creation is a meaningless exercise if the users of the financial statements do not know what the financial statements represent and how to analyze them. Your intermediate accounting textbook, to this point, has focused primarily on various accounting treatments and how they flow into and affect the creation of financial statements. Financial statement analysis has been sprinkled in throughout, but this is the first chapter devoted solely to this very important topic.

Various ratios can be pulled out of financial statement data to assist in the analysis process. These ratios can be compared to budgeted ratios, prior-year ratios for the same company, or other companies in the same industry to access company performance. Care must be taken to make sure that differing accounting policies between companies does not distort the ratios and provide a misleading picture.

In addition, if, say, a manager was being provided a bonus based on a certain ratio, the ratio could potentially be manipulated by near end-of-period activities to provide for a more favorable view of performance. For example, if someone was compensated for a low average collection period (based solely on year-end data), they could possibly discourage credit sales just prior to year-end, write off as many receivables as possible just prior to year-end, or increase collection efforts only during December. While the average collection period looks good using only year-end data while implementing these strategies, the real average collection period during the year was higher.

Ratios can be used not only in measuring company performance but also in analytical procedures used by auditors to detect errors or fraud that may have occurred. Sometimes required ratios are also built into loan agreements or contracts in order to obtain more favorable interest rates or terms.

While financial statement information can be used to analyze a company, financial statement information can also be used to estimate the market value of a company. The final section of this chapter introduces you to four methods that are used to estimate the market value of a company’s equity securities.
Learning Objectives

Refer to the Review of Learning Objectives at the end of the chapter. It is crucial that this section of the chapter is second nature to you before you attempt the homework, a quiz, or exam. This important piece of the chapter serves as your CliffsNotes or “cheat sheet” to the basic concepts and principles that must be mastered.

If after reading this section of the chapter you still don’t feel comfortable with all of the Learning Objectives covered, you will need to spend additional time and effort reviewing those concepts that you are struggling with.

The following “Tips, Hints, and Things to Remember” are organized according to the Learning Objectives (LOs) in the chapter and should be gone over after reading each of the LOs in the textbook.

Tips, Hints, and Things to Remember

LO1 – Organize a systematic financial ratio analysis using common-size financial statements and the DuPont framework.

How? The sheer number of ratios presented in this learning objective can be overwhelming. How will you remember them all? Luckily, you have probably been exposed to most of them at least once or twice by now in your accounting and finance courses. Still, keeping them straight is not always an easy task. Way back in Chapter 3, the following tips were provided to help you remember them based on the name of the ratio:

- Profitability, “return on,” ratios are going to have Net Income in the numerator and whatever is after the word “on” in the denominator.
- Activity, “turnover,” ratios are going to have whatever comes before the word “turnover” in the denominator and usually Sales in the numerator (Cost of Goods Sold in the case of Inventory Turnover).
- “Margin” ratios are always going to have whatever comes before the word “margin” in the numerator and Sales in the denominator.

It will help to carefully go through Exhibit 22-7 in the textbook and note not only how the ratios are computed but also what they mean and the different categories (efficiency, leverage, etc.) they can be classified under.
LO2 – Recognize the potential impact that differing accounting methods can have on the financial ratios of otherwise essentially identical companies.

**Why?** Ratio analysis should not be taken as the end-all in financial statement analysis. There are limitations to ratio analysis. This learning objective in the chapter shows how two companies using differing methods, but performing the same, can end up with vastly different ratios based on those differing methods.

Ratio analysis, by itself, ignores the importance of disclosure notes. By analyzing disclosure notes first, ratio analysis can be modified to make it more meaningful. A couple of the many key things to look for in the disclosure notes with respect to ratio analysis are the summary of significant accounting policies and the amount of operating leases that a company has undertaken (and, which if capitalized, could possibly change the amount of assets and liabilities dramatically).

LO3 – Perform a simple valuation of a company using financial statement data.

**Why?** Various models exist for estimating values of equity securities. It is important that accounting students be familiar with the both the methods and challenges of valuing equity securities.

The following sections, featuring various multiple choice questions, matching exercises, and problems, along with solutions and approaches to arriving at the solutions, is intended to develop your problem-solving and critical-thinking abilities. While learning through trial and error can be effective for improving your quiz and exam scores, and it can be a more interesting way to study than merely re-reading a chapter, that is only a secondary objective in presenting this information in this format.

The main goal of the following sections is to get you thinking, “How can I best approach this problem to arrive at the correct solution—even if I don’t know enough at this point to easily arrive at the proper results?” There is not one simple approach that can be applied to all questions to arrive at the right answer. Think of the following approaches as possibilities, as tools that you can place in your problem-solving toolkit—a toolkit that should be consistently added to. Some of the tools have yet to even be created or thought of. Through practice, creative thinking, and an ever-expanding knowledge base, you will be the creator of the additional tools.
Multiple Choice

**MC23-1 (LO1)** A useful tool in financial statement analysis is the common-size financial statement. What does this tool enable the financial analyst to do?

a. evaluate financial statements of companies within a given industry of approximately the same value
b. determine which companies in the same industry are at approximately the same stage of development
c. ascertain the relative potential of companies of similar size in different industries
d. compare the mix of assets, liabilities, capital, revenue, and expenses within a company over time or between companies within a given industry without respect to relative size

**MC23-2 (LO1)** Coroner Corporation had a current ratio of 2.0 at the end of 2010. Current assets and current liabilities increased by equal amounts during 2011. The effects on net working capital and on the current ratio, respectively, were

a. no effect; increase
b. no effect; decrease
c. increase; increase
d. decrease; decrease

**MC23-3 (LO1)** On December 31, 2010 and 2011, Jimenez Corporation had 100,000 shares of common stock and 10,000 shares of noncumulative and nonconvertible preferred stock issued and outstanding. Additional information:

- Stockholders’ equity at the end of 2011: $4,500,000
- Net income for 2011: 1,200,000
- Dividends on preferred stock year during 2011: 300,000
- Market price per share of common stock at the end of 2011: 144

The price-earnings ratio on common stock at December 31, 2011, was

a. 10 to 1.
b. 12 to 1.
c. 14 to 1.
d. 16 to 1.

**MC23-4 (LO2)** If a firm changes its inventory method from FIFO to LIFO just prior to a period of rising prices, what will be the effect on the following in the next period?

<table>
<thead>
<tr>
<th>Current Ratio</th>
<th>Inventory Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. no effect</td>
<td>increase</td>
</tr>
<tr>
<td>b. no effect</td>
<td>decrease</td>
</tr>
<tr>
<td>c. increase</td>
<td>decrease</td>
</tr>
<tr>
<td>d. decrease</td>
<td>increase</td>
</tr>
</tbody>
</table>
MC23-5 (LO3) Which of the following is NOT a model for evaluating equity securities?

a. constant future dividends  
b. price-earnings multiple  
c. discounted free cash flow  
d. perpetual payback method

Matching

Matching 23-1 (LO1) Listed below are the terms and associated definitions from the chapter for LO1. Match the correct definition letter with each term number.

___ 1. financial statement analysis  
___ 2. common-size financial statements  
___ 3. DuPont framework  
___ 4. margin  
___ 5. turnover

a. systematic approach to identifying general factors impacting return on equity; decomposes return on equity into profitability, efficiency, and leverage components  
b. profitability of each dollar in sales; another term for return on sales  
c. degree to which assets are used to generate sales  
d. examination of the relationships among financial statement numbers and the trends in those numbers over time  
e. financial statements standardized by a measure of size, either sales or total assets; all amounts are stated in terms of a percentage of the size measure
Problems

Problem 23-1 (LO1) Selected information from the 2011 and 2010 financial statements of Super Ratio Corporation is presented below:

<table>
<thead>
<tr>
<th></th>
<th>As of December 31</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>2010</td>
</tr>
<tr>
<td>Cash</td>
<td>$21,000</td>
</tr>
<tr>
<td>Marketable securities (current)</td>
<td>27,000</td>
</tr>
<tr>
<td>Accounts receivable (net)</td>
<td>60,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>105,000</td>
</tr>
<tr>
<td>Prepaid expenses</td>
<td>5,000</td>
</tr>
<tr>
<td>Land and building (net)</td>
<td>247,000</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>57,000</td>
</tr>
<tr>
<td>Accrued expenses</td>
<td>10,000</td>
</tr>
<tr>
<td>Notes payable (short-term)</td>
<td>8,000</td>
</tr>
<tr>
<td>Bonds payable (due in three years)</td>
<td>52,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>As of December 31</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>2010</td>
</tr>
<tr>
<td>Cash sales</td>
<td>$750,000</td>
</tr>
<tr>
<td>Credit sales (percent of cash sales)</td>
<td>82%</td>
</tr>
<tr>
<td>Cost of goods sold (percent of total sales)</td>
<td>60%</td>
</tr>
<tr>
<td>Net income</td>
<td>$30,000</td>
</tr>
<tr>
<td>Interest expense</td>
<td>6,000</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>6,000</td>
</tr>
</tbody>
</table>

Compute the following ratios for Super Ratio Corporation as of December 31, 2011. Round your answers to two decimal places.

1. Current ratio
2. Accounts receivable turnover
3. Inventory turnover
4. Asset turnover
5. Times interest earned
Problem 23-2 (LO1) Comparative balance sheet data for the Dugmore Company at the end of 2010 and 2011 follows:

Dugmore Company
Balance Sheet
December 31, 2011 and 2010

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>$ 71,000</td>
<td>$ 68,000</td>
</tr>
<tr>
<td>Long-term investments</td>
<td>67,000</td>
<td>43,000</td>
</tr>
<tr>
<td>Land, buildings, and equipment (net)</td>
<td>195,000</td>
<td>162,000</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>9,400</td>
<td>11,300</td>
</tr>
<tr>
<td>Other assets</td>
<td>5,000</td>
<td>8,000</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>$347,400</td>
<td>$292,300</td>
</tr>
</tbody>
</table>

|                  |         |         |
| **Liabilities**  |         |         |
| Accounts payable | $ 37,100| $ 34,000|
| Long-term liabilities—8% bonds | 23,500 | 17,900 |
| **Total liabilities** | $ 60,600| $ 51,900|

|                  |         |         |
| **Stockholders' Equity** |     |         |
| 6% preferred stock | $ 7,500| $ 7,500 |
| Common stock       | 50,000  | 50,000  |
| Additional paid-in capital | 46,000 | 46,000 |
| Retained earnings  | 183,300 | 136,900 |
| **Total stockholders’ equity** | $286,800| $240,400|
| **Total liabilities and stockholders’ equity** | $347,400| $292,300|

Prepare a common-size balance sheet for the two-year period using total assets to standardize.
Problem 23-3 (LO1) Income statements for Slattery Corporation show the following:

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales (net)</td>
<td>$500,000</td>
<td>$400,000</td>
<td>$350,000</td>
</tr>
<tr>
<td>Cost of goods sold:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning inventory</td>
<td>110,000</td>
<td>90,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Purchases</td>
<td>420,000</td>
<td>330,000</td>
<td>370,000</td>
</tr>
<tr>
<td>Cost of goods available for sale</td>
<td>$530,000</td>
<td>$420,000</td>
<td>$390,000</td>
</tr>
<tr>
<td>Ending inventory</td>
<td>170,000</td>
<td>110,000</td>
<td>90,000</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>360,000</td>
<td>310,000</td>
<td>300,000</td>
</tr>
<tr>
<td>Gross profit</td>
<td>$140,000</td>
<td>$ 90,000</td>
<td>$ 50,000</td>
</tr>
</tbody>
</table>

From the data presented, calculate the following ratios for 2012 and 2011:

1. Inventory turnover rate
2. Number of days' sales in inventories
3. Gross profit margin on sales

Problem 23-4 (LO2) The following three ratios have been computed using the financial statements for the year ended December 31, 2011, for Bacon Company:

Current ratio:

\[
\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}
\]

\[
= \frac{85,000}{55,000}
\]

\[= 1.55\]

Debt-to-equity ratio:

\[
\text{Debt-to-equity ratio} = \frac{\text{Total liabilities}}{\text{Stockholders' equity}}
\]

\[
= \frac{150,000}{130,000}
\]

\[= 1.15\]
Return on sales:

\[
\text{Return on sales} = \frac{\text{Net income}}{\text{Sales}} = \frac{\$50,000}{\$410,000} = 0.12
\]

The following additional information has been assembled:

a. Bacon uses the LIFO method of inventory valuation. Beginning inventory was $25,000 and ending inventory was $35,000. If Bacon had used FIFO, beginning inventory would have been $50,000 and ending inventory would have been $65,000.

b. Bacon’s sole depreciable asset was purchased on January 1, 2005. The asset cost $130,000 and is being depreciated over 15 years with no estimated salvage value. Although the 15-year life is within the acceptable range, most firms in Bacon’s industry depreciate similar assets over 10 years.

c. For 2011, Bacon decided to recognize a $22,000 liability for future environmental cleanup costs. Most other firms in Bacon’s industry have similar environmental cleanup obligations but have decided that the amounts of the obligations are not reasonably estimable at this time. On average, these firms recognized only 5% of their total environmental cleanup obligation.

Show how the values for the three ratios computed above differ for 2011 if Bacon had (a) used FIFO, (b) depreciated the asset over 10 total years, and (c) recognized only 5 percent of its environmental cleanup obligation. (d) Compute how the financial statements would differ if the alternative accounting methods had been used. Do not treat the use of these alternative methods as accounting changes. Ignore any income tax effects.
Problem 23-5 (LO3) The following information has been collected regarding Rumble Bee Company:

- Most recent annual cash dividend $0.90
- Dividend growth rate over the past five years 9%
- Most recent earnings per share $1.65
- Average P/E ratio of similar firms 20
- Required rate of return on equity capital 15%

Estimate a price per share for Rumble Bee Company using the following equity valuation models:

1. Constant future dividends
2. Constant dividend growth
3. Price-earnings multiple

Solutions, Approaches, and Explanations

MC23-1
Answer: d
Approach and explanation: Common-size financial statements allow for the comparison of companies that aren’t the same size, as well as those that are the same size. “Common size” refers to the fact that the numbers for all years and/or companies being presented are put into percentages—not that they are all of similar size, necessarily, to begin with.

The percentages in common-size financial statements are based on sales or total assets. Usually they are based on sales for the income statement and total assets for the balance sheet. Sometimes the balance sheet can be based on sales, as shown in the textbook.

Choices a, b, and c aren’t necessarily false choices. All of those items can take place with common-size financial statement analysis as well. However, choice d hits the mark most solidly since the others assume similarities, which is not a requirement.

MC23-2
Answer: b
Approach and explanation: If the number starts off at 2:1 and both increase by equal amounts, the new ratio is 3:2. Therefore, an equal increase to both, when the ratio starts out greater than 1 will always decrease the current ratio (2 > 1.5). At this point, you can cross off choices a and c.
For net working capital, pull some numbers out of the air and see what happens to them. Let's assume that we started off with $200 in current assets and $100 in current liabilities. (The numbers pulled out of the air shouldn't be just any numbers; they should equal a current ratio of 2.0. However, in this case, they could be any two numbers and you'd still come up with the same result.) Next, let's assume that they both increased by $50 during 2011. So now we have current assets of $250 and current liabilities of $150. Our net working capital before 2011 was $100 ($200 – $100). After 2011, it is still $100 ($250 – $150). Thus, there is no effect on net working capital when both current assets and current liabilities increase or decrease by the same amount during a period.

**MC23-3**
Answer: d
Approach and explanation: This question is yet another case of trying to get a drink of water out of a fire hose. You are given more information than you need to solve the problem, just like in real life. The key is to be able to sift through the information to pull out just those parts, and no more, that you need to correctly answer what is asked for. The question also forces you to think back a few chapters to how earnings per share are calculated.

But first, you need to figure out what the formula for the P/E ratio is. It isn't too difficult as the name pretty much gives it away. Price is the numerator and earnings is the denominator. That doesn't mean you just take 144 over 1,200,000, though. Obviously, 0.00012 to 1 isn't one of the choices. In this case, "earnings" means EPS and not net income.

The EPS calculation would be:

\[
\frac{(1,200,000 – 300,000)}{100,000} = \frac{900,000}{100,000} = 9
\]

Therefore, the P/E ratio is 144/9 = 16 to 1. You need not do anything with the number of preferred shares or the total amount of stockholders' equity at the end of the year.
**MC23-4**  
Answer: d  
Approach and explanation: Before jumping straight to the choices and looking at the effect on the current ratio and inventory turnover, it is important to first analyze what will happen with a change from FIFO to LIFO when prices are rising. If prices are rising and LIFO is being used, then cost of goods sold will be higher, compared to FIFO, since the last, more-expensive items purchased go into cost of goods sold. If cost of goods sold is higher, then ending inventory will be lower. With those two pieces of information in mind, you can then turn to the two items, or any items, asked for.

The current ratio is current assets divided by current liabilities. Current assets have gone down with lower ending inventory, so the current ratio will decrease. At this point, you know the correct answer has to be choice d.

**MC23-5**  
Answer: d  
Approach and explanation: Make sure you read the question carefully because it is asking which method is _not_ a method for valuating equity securities. Remember that the methods for valuing equity securities discussed in the textbook are constant future dividends, constant dividend growth, price-earnings multiples, and discounted free cash flow.

**Matching 23-1**  
1. d  
2. e  
3. a  
4. b  
5. c

Complete these terminology matching exercises without looking back at the textbook or on to the glossary. After all, you probably won’t have those as a reference at test time. Learning through trial and error causes the item to be learned better and to stick in your memory longer than if you just look at the textbook, glossary, or a dictionary and “cook book” the answers. Sure you may get the answer correct on your first attempt, but missing something is sometimes best for retention. Don’t be afraid of failure while studying and practicing.
Problem 23-1

1. Current ratio:

\[
\frac{($21,000 + $27,000 + $60,000 + $105,000 + $5,000)}{($57,000 + $10,000 + $8,000)} = \frac{$218,000}{$75,000} = 2.91
\]

Working capital would be the difference between the current assets and current liabilities, or $143,000 ($218,000 – $75,000).

2. Accounts receivable turnover:

\[
\frac{0.82 \times $750,000}{\frac{$60,000 + $98,000}{2}} = \frac{$615,000}{$79,000} = 7.78
\]

Notice two things here. First, only credit sales are included in the numerator since cash sales never make it into accounts receivable. Second, the average receivables for the year, rather than just the ending accounts receivable, are used.

3. Inventory turnover:

\[
\frac{0.60 \times [($750,000 + ($750,000 \times 0.82))]}{2} = \frac{$105,000 + $142,000}{2} = \frac{$819,000}{$123,500} = 6.63
\]

Inventory turnover uses cost of goods sold instead of sales since cost of goods sold is tied closer to inventory than sales is.
4. Asset turnover:

\[
\text{Asset turnover} = \frac{[$750,000 + ($750,000 \times 0.82)]}{($21,000 + $27,000 + $60,000 + $105,000 + $5,000 + $247,000)}
\]

\[
= \frac{$1,365,000}{$465,000}
\]

\[
= 2.94
\]

You will frequently see asset turnover using an average of total assets as well. The textbook shows it using just ending inventory, so that is what is shown here. If your professor marks you wrong for doing asset turnover one way instead of the other, you can make the argument in favor of using an average as it giving a better, less distortable answer. (For instance, a company that buys or sells a lot of assets just before year-end will not receive a very true picture by computing asset turnover based only on a year-end number.) Or you can make an argument for using just ending total assets, for this turnover ratio only, by saying that you were following the procedure in the textbook.

5. Times interest earned:

\[
\text{Times interest earned} = \frac{($30,000 + $6,000 + $6,000)}{6,000}
\]

\[
= \frac{$42,000}{6,000}
\]

\[
= 7.00
\]

Make sure to add back interest and income taxes before figuring out how many times the interest is earned.
## Problem 23-2

### Dugmore Company

**Balance Sheet**

**December 31, 2011 and 2010**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>20%</td>
<td>23%</td>
</tr>
<tr>
<td>Long-term investments</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>Land, buildings, and equipment (net)</td>
<td>57</td>
<td>55</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Other assets</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable</td>
<td>11%</td>
<td>12%</td>
</tr>
<tr>
<td>Long-term liabilities—8% bonds</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Stockholders’ Equity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6% preferred stock</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Common stock</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>Additional paid-in capital</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>53</td>
<td>47</td>
</tr>
<tr>
<td><strong>Total stockholders’ equity</strong></td>
<td>82%</td>
<td>82%</td>
</tr>
<tr>
<td><strong>Total liabilities and stockholders’ equity</strong></td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Problem 23-3

1. 2012:

\[
\frac{360,000}{110,000 + 170,000} = 2.57 \text{ times}
\]

2011:

\[
\frac{310,000}{90,000 + 110,000} = 3.10 \text{ times}
\]

2. 2012:

\[
\frac{365}{2.57} = 142 \text{ days}
\]

2011:

\[
\frac{365}{3.10} = 117.7 \text{ days}
\]
3. 2012:

\[
\frac{140,000}{500,000} = 28\%
\]

2011:

\[
\frac{90,000}{400,000} = 22.5\%
\]

**Problem 23-4**

(a) Using FIFO:

Ending inventory increases by $30,000 ($65,000 – $35,000).

Net income for 2011 increases by $5,000 \[($65,000 – $35,000) – (50,000 – $25,000)\].

Beginning retained earnings increases by $25,000 ($50,000 – $25,000).

(b) 10-year useful life:

Book value at December 31, 2011:

15-year life: $130,000 – \([(130,000/15) \times 4]\) = $95,333

10-year life: $130,000 – \([(130,000/10) \times 4]\) = $78,000

Book value decreases by $17,333 ($95,333 – $78,000).

Net income for 2011 decreases by $4,333 \[(130,000/10) – (130,000/15)\].

Beginning retained earnings decreases by $13,000 \[(130,000/10) \times 3\] – \[(130,000/15) \times 3\].

(c) Environmental cleanup obligation:

Net income for 2011 increases by $20,900 \[(22,000 – (22,000 \times 0.05))\].

Environmental cleanup obligation decreases by $20,900.
(d) Adjusted current ratio:

\[
\frac{($85,000 + $30,000)}{55,000} \quad \frac{115,000}{55,000} = 2.09
\]

Adjusted debt-to-equity ratio:

\[
\frac{($150,000 - $20,900)}{($130,000 + $5,000 + $25,000 - $4,333 - $13,000 + $20,900)} \quad \frac{129,100}{163,567} = 0.78
\]

Adjusted return on sales ratio:

\[
\frac{($50,000 + $5,000 - $4,333 + $20,900)}{410,000} \quad \frac{71,567}{410,000} = 0.18
\]

**Problem 23-5**

1. Constant future dividends:

\[
\frac{\text{Dividends}}{\text{Required rate of return on equity capital}} = \frac{0.90}{0.15} = 6.00
\]
2. Constant dividend growth:

\[
\frac{\text{Dividends}}{\text{Required rate of return on equity capital} - \text{Expected future dividend growth rate}} = \frac{\$0.90}{\$0.15 - \$0.09} = \$15.00
\]

3. Price-earnings multiple:

\[
\text{Most recent earnings per share} \times \text{Average P/E ratio of similar firms} = \$1.65 \times 20 = \$33.00
\]

Glossary

Note that Appendix C in the rear portion of the textbook contains a comprehensive glossary for all of the terms used in the textbook. That is the place to turn to if you need to look up a word but don’t know which chapter(s) it appeared in. The glossary below is identical with one major exception: It contains only those terms used in Chapter 23. This abbreviated glossary can prove quite useful when reviewing a chapter, when studying for a quiz for a particular chapter, or when studying for an exam which covers only a few chapters including this one. Use it in those instances instead of wading through the 20 or so pages of comprehensive glossary in the textbook trying to pick out just those words that were used in this chapter.

**common-size financial statements**  Financial statements standardized by a measure of size, either sales or total assets. All amounts are stated in terms of a percentage of the size measure.

**DuPont framework**  Systematic approach to identifying general factors impacting return on equity; decomposes return on equity into profitability, efficiency, and leverage components.

**financial statement analysis**  Examination of the relationships among financial statement numbers and the trends in those numbers over time.

**margin**  Profitability of each dollar in sales; another term for return on sales.

**turnover**  Degree to which assets are used to generate sales.