Chapter 13

Analyzing Financial Statements

ANSWERS TO QUESTIONS

1. Primary items on the financial statements about which creditors usually are concerned include: (a) income—profit potential of the business, (b) cash flows—ability of the business to generate cash, and (c) assets and debts—financial position.

2. The notes to the financial statements are particularly important to decision makers because they explain, usually in narrative fashion, circumstances and special events that cannot be communicated adequately in the body of the financial statements. The notes call attention to such items as pending problems, contingent liabilities, and circumstances surrounding certain judgments that were made in measuring and reporting. They are useful in interpreting the amounts given in the financial statements and in making projections of the future performance of the business.

3. The primary purpose of comparative financial statements is to provide the user with information on the **short-term trends** of the various financial factors reported in the financial statements. For example, the trends of such factors as sales, expenses, income, amount of debt, retained earnings, and earnings per share are particularly important in assessing the record of the company in the past and the present. These short-term trends should be used in predicting future performance of the business. Comparative statements usually report only two consecutive periods which often is too short to assess adequately certain trends.

4. Statement users are interested especially in financial summaries covering several years because the **long-term trends** of the business are revealed. Statement users must make projections of the future performance of the business in their decisions to either invest or disinvest. Long-term financial summaries provide particularly useful information in making these projections. Financial data covering only one or two periods have limited usefulness for this particular type of decision.

The primary limitation of unusually long-term summaries is that early years may not be useful because of changes in the business, industry, and environment.

5. Ratio analysis is a technique for computing and pinpointing certain significant relationships in the financial statements. A ratio or percent expresses a proportionate relationship between two different amounts reported on the financial statements. A ratio is computed by dividing one amount by another amount; the divisor is known as the base amount. For example, the profit margin ratio is computed by dividing net income by net sales. Ratio analysis is particularly useful because it may reveal critical relationships that are not readily apparent from absolute dollar amounts.

6. Component percentages are representations, as ratios or percents, of the relationships between each of the several individual amounts that make up a single total. For example, on the balance sheet the component percentages for assets are computed by dividing the amount of each individual asset by the amount of total assets. The resulting ratios or percentages will sum to 100 percent. Component percentages are useful because they reveal relative relationships that are not readily apparent from absolute dollar amounts.

7. Fundamentally, return on investment is income divided by investment. The two concepts of return on investment are:

(a) Return on equity (net income divided by owners’ investment). This rate reflects the return earned for the owners after deducting the return to the creditors (interest expense is a deduction to derive income).

(b) Return on assets (return on total assets, which includes both owners’ equity and creditors’ equity). This rate reflects the return earned on the total resources employed. The computation is net income plus after-tax interest expense divided by total assets.

Usually both concepts are applied because each serves a somewhat different purpose. Return on equity reflects the viewpoint of the owners because it measures the net return on their investment only. Return on assets reflects the earnings performance of the company on total resources used (i.e., from both owners and creditors).

8. Financial leverage percentage is measured as the difference between the rate of return on equity and the rate of return on assets. This difference is caused only by interest on debt. An excess of the rate of return on equity over the rate of return on assets is due to financial leverage; that is, the company earned a higher rate on total investment than the net-of-tax interest rate on all debt. This advantage accrues to the benefit of the stockholders (i.e., positive leverage).

9. Profit margin is the ratio between net income and net sales. It reflects performance in respect to the control of expenses to net sales but is deficient as a measure of profitability because it does not consider the amount of resources (i.e., investment) used to earn the income amount. Profitability is best measured as the ratio of income to investment.

10. The current ratio is computed by dividing total current assets by total current liabilities. In contrast, the quick ratio is computed by dividing quick assets (i.e., the sum of cash, short-term investments, and accounts receivable) by current liabilities. The current ratio tends to measure liquidity and to indicate the cushion of current assets over current liabilities. In contrast the quick ratio is a much more severe test of current liquidity because the assets used in computing the ratio are cash and those that are very near to cash.

11. A debt/equity ratio reflects the portion of total assets or resources used by a business that was provided by creditors versus owners. In some companies, the amount of debt is approximately 70 percent of the total assets which means that the company is highly leveraged, which is a favorable side of financing by debt. That is, a company earning, say, 20 percent on total assets, while at the same time paying interest of 8 percent on debt, would generate a difference which accrues to the benefit of the stockholders. On the other side, the interest on debt must be paid each period, regardless of whether income was earned, and at the maturity of the debt, the full principal must be paid. In contrast, resources provided by owners are much less risky to the business because dividends do not have to be paid and there is no fixed maturity amount to be paid on a specific date.

12. Market tests are intended to measure the “market worth” per share of stock. Market tests relate some amount to a share of stock (such as EPS or dividends paid per share). Each time the share price changes the measurement changes. The two commonly used market tests are: (a) price/earnings ratio (i.e., market price per share divided by EPS) and (b) dividend yield ratio (i.e., dividends per share divided by the market price per share).

13. The primary limitations associated with using ratios are:

(a) no specification exists (which is generally agreed upon) of how each ratio should be computed and (b) evaluation of the results (i.e., whether a ratio at a given amount is good or bad) is subjective. The latter problem indicates a need to select one or more “standards” against which the computed ratio amount may be compared.

ANSWERS TO MULTIPLE CHOICE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. c) | 1. c) | 1. c) | 1. c) | 1. a) |
| 1. c) | 1. d) | 1. a) | 1. b) | 1. d) |

Authors’ Recommended Solution Time

(Time in minutes)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mini-exercises | | Exercises | | Problems | | Alternate Problems | | Cases and  Projects | |
| No. | Time | No. | Time | No. | Time | No. | Time | No. | Time |
| 1 | 5 | 1 | 20 | 1 | 60 | 1 | 60 | 1 | 50 |
| 2 | 5 | 2 | 20 | 2 | 45 | 2 | 45 | 2 | 50 |
| 3 | 5 | 3 | 20 | 3 | 60 | 3 | 20 | 3 | 60 |
| 4 | 5 | 4 | 25 | 4 | 20 | 4 | 60 | 4 | 45 |
| 5 | 5 | 5 | 15 | 5 | 60 | 5 | 60 | 5 | 20 |
| 6 | 5 | 6 | 20 | 6 | 30 | 6 | 30 | 6 | 30 |
| 7 | 5 | 7 | 20 | 7 | 60 |  |  | 7 | \* |
| 8 | 5 | 8 | 20 | 8 | 30 |  |  |  |  |
| 9 | 5 | 9 | 20 | 9 | 20 |  |  |  |  |
| 10 | 5 | 10 | 20 | 10 | 50 |  |  |  |  |
|  |  | 11 | 20 |  |  |  |  |  |  |
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\* Due to the nature of this project, it is very difficult to estimate the amount of time students will need to complete the assignment. As with any open-ended project, it is possible for students to devote a large amount of time to these assignments. While students often benefit from the extra effort, we find that some become frustrated by the perceived difficulty of the task. You can reduce student frustration and anxiety by making your expectations clear. For example, when our goal is to sharpen research skills, we devote class time to discussing research strategies. When we want the students to focus on a real accounting issue, we offer suggestions about possible companies or industries.

**MINI-EXERCISES**

**M13–1.**

|  |  |  |
| --- | --- | --- |
| Gross Profit ÷ $1,665,000 | = | 44% |
| Gross Profit | = | $732,600 |
|  |  |  |
| Revenue | $1,665,000 |  |
| Cost of Goods Sold | (X) |  |
| Gross Profit | $732,600 |  |
| Cost of Goods Sold | $932,400 |  |

**M13–2.**

2015

|  |  |
| --- | --- |
| Sales | $31,198 \* |
| Cost of Goods Sold | ($9,107) |
| Gross Profit | $22,091 |

\*Sales 2015: $29,600 x 1.054 = $31,198

Gross Profit %: $22,091 ÷ $31,198 = 70.8%

**M13–3.**

$183,000 / [($1,100,000 + $1,250,000) ÷ 2] = 15.6%

**M13–4.**

21% - 6% = 15%

**M13–5.**

If the average sales volume remains the same, then the cost of goods sold will also remain the same. If the inventory decreases by 25%, the inventory turnover ratio will increase.

**M13–6.**

Current Assets X

+ Noncurrent Assets $480,000

Total Assets $1,400,000

Current Assets = $920,000

$920,000 ÷ Current Liabilities = 3.5

Current Liabilities = $262,857

**M13–7.**

|  |  |  |  |
| --- | --- | --- | --- |
| Current Ratio | = |  | Current Assets |
|  | Current Liabilities |
|  |  |  |  |
| Quick Ratio | = |  | Quick Assets |
|  | Current Liabilities |

By the definitions of current ratio and quick ratio, one can see that the quick ratio must always be less than or equal to the current ratio. We know that a mistake has been made in this case because the quick ratio is greater than the current ratio and that is not possible.

**M13–8.**

Market Price per Share $228 ÷ Earnings per Share $9.50 = P/E multiplier 24

$9.50 x 1.13 = $10.74

$10.74 x 24 = New Stock Price $257.64

**M13–9.**

5% = $3.50 ÷ Market Price per Share

$70.00 = Market Price per Share

**M13–10.**

In most circumstances, a change from FIFO to LIFO will cause inventory to decrease and cost of goods sold to increase.

|  |  |
| --- | --- |
| Profit Margin | Will decrease |
| Fixed Asset Turnover | Will not be affected |
| Current Ratio | Will decrease |
| Quick Ratio | Will not be affected |

**EXERCISES**

**E13–1.**

1. Car manufacturer (high inventory; high property & equipment; lower inventory turnover)

2. Wholesale candy company (high inventory turnover)

3. Retail fur store (high gross profit; high inventory)

4. Advertising agency (low inventory; absence of gross profit)

**E13–2.**

1. Meat packer (high inventory turnover)

2. Travel agency (no gross profit or inventory; high receivables)

3. Hotel (high property & equipment; no gross profit or inventory)

4. Drug company (high gross profit, low inventory turnover)

**E13–3.**

1. Cable T.V. Company (no gross profit; high property & equipment)

2. Accounting firm (high receivables; no gross profit)

3. Retail jewelry store (high inventory; high gross profit)

4. Grocery store (high inventory turnover)

**E13–4.**

1. Restaurant (high inventory turnover; high property & equipment)

2. Full-line department store (high cost of inventory; high gross profit)

1. Automobile dealer (high cost of inventory; low property & equipment)
2. Wholesale fish company (high inventory turnover; lower gross profit)

**E13–5.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. |  | A |  | Profit margin |
| 2. |  | H |  | Inventory turnover ratio |
| 3. |  | B |  | Average days to collect |
| 4. |  | L |  | Dividend yield ratio |
| 5. |  | C |  | Return on equity |
| 6. |  | G |  | Current ratio |
| 7. |  | K |  | Debt/equity ratio |
| 8. |  | M |  | Price/earnings ratio |
| 9. |  | E |  | Financial leverage percentage |
| 10. |  | I |  | Receivable turnover ratio |
| 11. |  | J |  | Average days’ supply in inventory |
| 12. |  | D |  | Earnings per share |
| 13. |  | N |  | Return on assets |
| 14. |  | F |  | Quick ratio |
| 15. |  | Q |  | Times interest earned |
| 16. |  | O |  | Cash coverage ratio |
| 17. |  | P |  | Fixed asset turnover ratio |

**E13–6.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Lowe's Companies, Inc.** |  | | | |  | |  | | | |  | | | |  |  | | | | | | | |  |  |  | | | | |  | | |  |  | | | | | | | |  |  | | | | | |  | |
| **Consolidated Statements of Earnings** | | | | | | |  |  | | | |  | | | | |  |  | | | | | | | |  |  |  | | | |  | | | |  |  | | | | | | | |  | |  | | | | |  |
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| (In millions, except per share and percentage data) | Feb 3,  2012 | | | | | |  | % | | | |  | | | | |  | Jan 28,  2011 | | | | | | | |  |  | % | | | |  | | | |  | Jan 29,  2010 | | | | | | | |  | | % | | | | |  |
| Fiscal years ended on | Sales | | | |  | | | | |  | Sales | | | |  | | | | Sales | | | | |  |
|  |  | | | | | |  |  | | | |  | | | | |  |  | | | | | | | |  |  |  | | | |  | | | |  |  | | | | | | | |  | |  | | | | |  |
| **Net sales** | **$** | **50,208** | | | | |  |  | **100.00** | | | **%** | | | | |  | **$** | | **48,815** | | | | | |  |  |  | **100.00** | | | **%** | | | |  | **$** | | **47,220** | | | | | |  | |  | **100.00** | | | | **%** |
|  |  |  | | | | |  |  |  | | |  | | | | |  |  | |  | | | | | |  |  |  |  | | |  | | | |  |  | |  | | | | | |  | |  |  | | | |  |
| Cost of sales |  | 32,858 | | | | |  |  | 65.44 | | |  | | | | |  |  | | 31,663 | | | | | |  |  |  | 64.86 | | |  | | | |  |  | | 30,757 | | | | | |  | |  | 65.14 | | | |  |
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| **Gross margin** |  | **17,350** | | | | |  |  | **34.56** | | |  | | | | |  |  | | **17,152** | | | | | |  |  |  | **35.14** | | |  | | | |  |  | | **16,463** | | | | | |  | |  | **34.86** | | | |  |
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| Expenses: |  |  | | | | |  |  |  | | |  | | | | |  |  | |  | | | | | |  |  |  |  | | |  | | | |  |  | |  | | | | | |  | |  |  | | | |  |
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| Selling, general and administrative |  | 12,593 | | | | |  |  | 25.08 | | |  | | | | |  |  | | 12,006 | | | | | |  |  |  | 24.60 | | |  | | | |  |  | | 11,737 | | | | | |  | |  | 24.85 | | | |  |
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| Depreciation |  | 1,480 | | | | |  |  | 2.95 | | |  | | | | |  |  | | 1,586 | | | | | |  |  |  | 3.25 | | |  | | | |  |  | | 1,614 | | | | | |  | |  | 3.42 | | | |  |
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| Interest - net |  | 371 | | | | |  |  | 0.74 | | |  | | | | |  |  | | 332 | | | | | |  |  |  | 0.68 | | |  | | | |  |  | | 287 | | | | | |  | |  | 0.61 | | | |  |
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| **Total expenses** |  | **14,444** | | | | |  |  | **28.77** | | |  | | | | |  |  | | **13,924** | | | | | |  |  |  | **28.53** | | |  | | | |  |  | | **13,638** | | | | | |  | |  | **28.88** | | | |  |
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| **Pre-tax earnings** |  | **2,906** | | | | |  |  | **5.79** | | |  | | | | |  |  | | **3,228** | | | | | |  |  |  | **6.61** | | |  | | | |  |  | | **2,825** | | | | | |  | |  | **5.98** | | | |  |
|  |  |  | | | | |  |  |  | | |  | | | | |  |  | |  | | | | | |  |  |  |  | | |  | | | |  |  | |  | | | | | |  | |  |  | | | |  |
| Income tax provision |  | 1,067 | | | | |  |  | 2.13 | | |  | | | | |  |  | | 1,218 | | | | | |  |  |  | 2.49 | | |  | | | |  |  | | 1,042 | | | | | |  | |  | 2.20 | | | |  |
|  |  |  | | | | |  |  |  | | |  | | | | |  |  | |  | | | | | |  |  |  |  | | |  | | | |  |  | |  | | | | | |  | |  |  | | | |  |
| **Net earnings** | **$** | **1,839** | | | | |  |  | **3.66** | | | **%** | | | | |  | **$** | | **2,010** | | | | | |  |  |  | **4.12** | | | **%** | | | |  | **$** | | **1,783** | | | | | |  | |  | **3.78** | | | | **%** |
|  |  |  | | | | |  |  |  | | |  | | | | |  |  | |  | | | | | |  |  |  |  | | |  | | | |  |  | |  | | | | | |  | |  |  | | | |  |
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There is a decline in net earnings as a percent of sales and gross margin from 2011 to 2012. The decline in profitability also appears to be related to cost control with expenses increasing as a percent of sales. Management should focus on reducing selling, general and administrative costs.

**E13–7.**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Current Assets (1) | | | | | Current Liabilities (2) | | | | | Current Ratio (1 ÷ 2) | | | |
| Start |  |  |  | $120,000 |  |  | ($120,000 ÷ 1.5) |  | $80,000 |  | |  | 1.50 |  | |  |
| Transaction (1) |  | Inventory |  | + 40,000 |  |  | Accts. Pay. |  | + 40,000 |  | |  |  |  | |  |
| Subtotal |  |  |  | 160,000 |  |  |  |  | 120,000 |  | |  | 1.33 |  | |  |
|  |  |  |  |  |  |  |  |  |  |  | |  |  |  | |  |
| Transaction (2)\* |  | Cash |  | – 3,000 |  |  |  |  |  |  | |  |  |  | |  |
|  |  |  |  | $157,000 |  |  |  |  | $120,000 |  | |  | 1.31 |  | |  |

\*Debt and truck are noncurrent items.

**E13–8.**

Effect on Current Ratio

|  |  |
| --- | --- |
| 1. | Increase, assuming that cash was collected from sale |
| 2. | Will decrease |
| 3. | Will decrease |
| 4. | Will increase |

**E13–9.**

Turnover:

|  |  |  |
| --- | --- | --- |
| Accounts receivable $75,312\* ÷ [($6,275 + $6,068) ÷ 2] | = | 12.2 |
| Inventory ($83,608 x 0.48) ÷ [($7,379 + $6,721) ÷ 2] | = | 5.7 |
| \*$83,680 x 90% = $75,312 |  |  |

Days:

|  |  |  |
| --- | --- | --- |
| Accounts receivable (365 days ÷ 12.2) | = | 29.9 |
| Inventory (365 days ÷ 5.7) | = | 64.0 |

**E13–10.**

Cost of Goods Sold = 5.0 x $1,456,414,000

Cost of Goods Sold = $7,282,070,000

Net Sales = 7.5 x $1,218,874,000

Net Sales = $9,141,555,000

Less: CGS = 7,282,070,000

Gross profit = $1,859,485,000

**E13–11.**

Turnover:

|  |  |  |
| --- | --- | --- |
| Accounts receivable $700,000\* ÷ [($45,000 + $60,000) ÷ 2] | = | 13.3 |
| Inventory ($1,000,000 x 0.6) ÷ [($70,000 + $25,000) ÷ 2] | = | 12.6 |
| \*$1,000,000 x 70% = $700,000 |  |  |

Days:

|  |  |  |
| --- | --- | --- |
| Accounts receivable (365 days ÷ 13.3) | = | 27.4 |
| Inventory (365 days ÷ 12.6) | = | 30.0 |

**E13–12.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Current Assets (1) | | |  |  | Current Liabilities (2) | | |  | Current Ratio (1 ÷ 2) | | |
| Start |  |  |  | $410,000 |  |  | ($410,000 ÷ 2) |  | $205,000 |  |  |  | 2.00 |  |
| Transaction (1) |  | A/R\* |  | +11,000 |  |  |  |  |  |  |  |  |  |  |
| Subtotal |  |  |  | 421,000 |  |  |  |  | 205,000 |  |  |  | 2.05 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Transaction (2) |  |  |  |  |  |  | Dividends pay. |  | +50,000 |  |  |  |  |  |
|  |  |  |  | 421,000 |  |  |  |  | 255,000 |  |  |  | 1.65 |  |
| Transaction (3) |  | Cash Prepaid |  | -12,000  +12,000 |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 421,000 |  |  |  |  | 255,000 |  |  |  | 1.65 |  |
| Transaction (4) |  | Cash |  | -50,000 |  |  | Dividends pay. |  | -50,000 |  |  |  |  |  |
|  |  |  |  | 371,000 |  |  |  |  | 205,000 |  |  |  | 1.81 |  |
| Transaction (5) |  | Cash |  | +11,000  -11,000 |  |  |  |  |  |  |  |  |  |  |
|  |  | A/R |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 371,000 |  |  |  |  | 205,000 |  |  |  | 1.81 |  |
| Transaction (6) |  |  |  |  |  |  | ST Lia. |  | +45,000 |  |  |  |  |  |
|  |  |  |  | 371,000 |  |  |  |  | 250,000 |  |  |  | 1.48 |  |

\*We assume that the periodic inventory system is used and, therefore, there is no impact on inventory. Some students will try to try to reduce inventory as part of this transaction.

**E13–13.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Current Ratio | $1,066,595  $670,891 | | | = | 1.6 |
| Inventory Turnover |  | $1,648,551 |  | = | 6.6 |
|  | [($251,205 + $249,658) ÷ 2] |  |
| Account Receivable Turnover |  | $2,461,200 \* |  | = | 5.6 |
|  | [($450,861 + $429,131) ÷ 2] |  |
|  | \* $4,102,000 x 60% = $2,461,200 | | |  |  |

**PROBLEMS**

**P13–1.**

1. Company A has a high level of liquidity as shown by the current ratio but the low quick ratio indicates that much of the liquidity is tied up in inventory.
2. The low inventory turnover is another indication of an excessive amount of inventory. Analysts would be concerned about whether the inventory could be quickly converted to cash.
3. In addition to liquidity concerns, Company A shows a high debt/equity ratio.
4. Company A does not seem to have good growth opportunities. The market has valued Company A at a low price/earnings multiple.

**P13–2.**

1. Company A is either extremely efficient at inventory management or it does not carry enough inventory to support its operations. The low current ratio (in combination with an average quick ratio) and the high inventory turnover give an indication of low levels of inventory.
2. Company A appears to have the ability to borrow additional funds given its low debt/equity ratio.
3. Company A seems to pay low dividends and has a high price/earnings multiple. These ratios would suggest good growth opportunities.

**P13–3.**

|  |  |
| --- | --- |
| Commerce Bank | C. 15 |
| Duke Energy | F. 13 |
| Ford | D. Not applicable |
| Home Depot | B. 12 |
| Motorola | G. 99 |
| Starbucks | A. 33 |
| Pepsi | E. 20 |
| Continental Airlines | H. 8 |

**P13–4.**

JCPenney is the stronger company and probably the better investment. JCPenney has a higher gross profit margin, which means that they make more gross profit on each dollar of sales than does Sears. This is very significant since the two companies are in the same business, and operate in the same way. The higher gross profit for JCPenney is also reflected in its higher profit margin and stronger return on assets and return on equity. The JCPenney capital structure includes more debt which gives the company a higher degree of financial leverage. Their investors receive a higher return on equity but there is additional risk. JCPenney is paying dividends while Sears is not. The P/E ratio for Sears is higher than JCPenney suggesting that the market sees better growth prospects for Sears. While EPS for Sears is higher, the stock costs more than twice as much as the stock for JCPenney.**P13–5.**

Req. 1

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ratio | | | | | Ernst Company | | | | Young Company | | |
|  | Tests of profitability: | | |  |  |  | | |  |  |  |
|  | 1. |  | Return on equity |  |  | $45,000 ÷ $238,000 = 18.9% | | |  |  | $91,000 ÷ $689,000 = 13.2% |
|  | 2. |  | Return on assets |  |  | [$45,000 + ($65,000 x 10% x.70)]  ÷ $402,000 = 12.3% | | |  |  | [$91,000 + ($60,000 x 10% x .70)]  ÷ $798,000 = 11.9% |
|  | 3. |  | Financial leverage percentage |  |  | 18.91% – 12.33% = 6.6% | | |  |  | 13.2% – 11.9% = 1.3% |
|  | 4. |  | Earnings per share |  |  | $45,000 ÷ 14,800 sh. = $3.04 | | |  |  | $91,000 ÷ 51,200 sh. = $1.78 |
|  | 5. |  | Profit margin |  |  | $45,000 ÷ $447,000 = 10.0% | | |  |  | $91,000 ÷ $802,000 = 11.3% |
|  | 6. |  | Fixed asset turnover |  |  | $447,000 ÷ $140,000 = 3.2 | | |  |  | $802,000 ÷ $401,000 = 2.0 |
|  | Tests of liquidity: | | |  |  |  |  |  |  | | |
|  | 7. |  | Cash ratio |  |  | $41,000 ÷ $99,000 = .41 | | |  |  | $21,000 ÷ $49,000 = .43 |
|  | 8. |  | Current ratio |  |  | $178,000 ÷ $99,000 = 1.8 | | |  |  | $92,000 ÷ $49,000 = 1.9 |
|  | 9. |  | Quick ratio |  |  | $79,000 ÷ $99,000 = .8 | | |  |  | $52,000 ÷ $49,000 = 1.1 |
|  | 10. |  | Receivable turnover |  |  | $149,000 ÷  [($38,000 + $18,000) ÷ 2] = 5.3 | | |  |  | $267,333 ÷ [($31,000 + $38,000) ÷ 2]  = 7.8 |
|  | 11. |  | Inventory turnover |  |  | $241,000 ÷  [($99,000 + $94,000) ÷ 2] = 2.5 | | |  |  | $400,000 ÷ [($40,000 + $44,000) ÷ 2]  = 9.5 |
|  | Solvency and equity position: | | |  |  |  |  |  |  | | |
|  | 12. |  | Debt/equity ratio |  |  | $164,000 ÷ $238,000 = .69 | | |  |  | $109,000 ÷ $689,000 = .16 |
|  |  |  |  |  |  |  | | |  |  |  |
|  | *Market tests:* | | |  |  |  |  |  |  | | |
|  | 13. |  | Price/earnings ratio |  |  | $22 ÷ $3.04 = 7.2 | | |  |  | $15 ÷ $1.78 = 8.4 |
|  | 14. |  | Dividend yield ratio |  |  | ($33,000 ÷ 14,800 shares) ÷  $22 = 10.1% | | |  |  | ($148,000 ÷ 51,200 shares) ÷ $15  = 19.3% |

Req. 2

Recommended choice: Ernst Company

Basis for recommendation:

1. The reported information for Ernst Company is audited; therefore, it has more credibility.
2. Profitability in the future has a higher probability for Ernst Company because the return on equity is better although return on assets is about the same. The resulting leverage advantage occurs because of the use of debt. Ernst Company obtains more of its total resources by borrowing.

**P13–5. (continued)**

Req. 2 (continued)

Ernst Company is taking better advantage of this leverage. The advantageous position of Ernst Company also is reflected in EPS. Ernst Company has a profit margin of 10% (compared with the better 11.3% profit margin of Young Company). Ernst Company earned net income of $45,000 while using total investment of only $402,000. Young Company earned net income of $91,000 (twice as much) while using total investment $798,000 (also twice as much), but Ernst Company obtained a much higher percent of its total investment through debt (thus, a much better leverage factor, and a much higher return on owners’ equity.

3. Young Company has a better liquidity position measured in terms of the current ratio and the quick ratio. Young Company is in a better position in respect to credit and collections as shown by the receivable turnover ratio. Also, Ernst Company reflects a significantly lower (unfavorable) inventory turnover. This difference, in view of sales revenue, suggests overstocking by Ernst.

4. The market tests favor Young Company but the company declared and paid a dividend in excess of its profits. This pattern cannot be continued. This payout should cause concern because Young Company is low on cash.

Constraint—The above analysis is based on only one year which poses a problem of evaluation. Selected detailed data for the prior year should be analyzed in a similar manner. A five- to ten-year summary of selected values also would be quite useful. Other particularly important information should be evaluated, such as the characteristics of the company, the industry, economic conditions, and the quality of the management.

**P13–6.**

Req. 1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | |
|  |  |  |  | **Increase (Decrease)** | |
|  |  |  |  | **2015 over 2014** | |
|  | **Income Statement** | **2015** | **2014** | **Amount** | **Percent** |
|  | Sales revenue | $190,0001 | $167,000 | $ **23,000** | **13.77** |
|  | Cost of goods sold | 112,000 | 100,000 | **12,000** | **12** |
|  |  |  |  |  |  |
|  | Gross profit | 78,000 | 67,000 | **11,000** | **16.42** |
|  | Operating expenses and interest expense | 56,000 | 53,000 | **3,000** | **5.66** |
|  |  |  |  |  |  |
|  | Pretax income | 22,000 | 14,000 | **8,000** | **57.14** |
|  | Income tax | 8,000 | 4,000 | **4,000** | **100** |
|  |  |  |  |  |  |
|  | Net income | 14,000 | 10,000 | $ **4,000** | **40** |
|  |  |  |  |  |  |
|  | **Balance Sheet** |  |  |  |  |
|  | Cash | $4,000 | $7,000 | $ **-3,000** | **-42.86** |
|  | Accounts receivable (net) | 14,000 | 18,000 | **-4,000** | **-22.22** |
|  | Inventory | 40,000 | 34,000 | **6,000** | **17.65** |
|  | Operational assets (net) | 45,000 | 38,000 | **7,000** | **18.42** |
|  |  |  |  |  |  |
|  |  | 103,000 | 97,000 | $ **6,000** | **6.19** |
|  |  |  |  |  |  |
|  | Current liabilities (no interest) | $16,000 | $17,000 | $ **-1,000** | **-5.88** |
|  | Long-term liabilities (10% interest) | 45,000 | 45,000 | **0** | **0** |
|  | Common stock (par $5) | 30,000 | 30,000 | **0** | **0** |
|  | Retained earnings | 12,000 | 5,000 | **7,000** | **140** |
|  |  |  |  |  |  |
|  |  | 103,000 | 97,000 | $ **6,000** | **6.19** |
|  |  |  |  |  |  |

|  |
| --- |
| *1One-third was credit sales.* |

|  |  |  |
| --- | --- | --- |
| Req. 2 |  |  |
|  | Working capital change | **0** |
|  |  |  |

**P13–7.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Req. 1 | | |  | |
| . | |  | | |
|  | |  | **Component Percentages 2015** | |
|  | | **Income statement:** |  | |
|  | | Sales revenue (the base amount) | **100** | |
|  | | Cost of goods sold | **59** | |
|  | |  |  | |
|  | | Gross profit on sales | **41** | |
|  | | Operating expenses | **29** | |
|  | |  |  | |
|  | | Pretax income | **12** | |
|  | | Income taxes | **4** | |
|  | |  |  | |
|  | | Net income | **8** | |
|  | |  |  | |
|  | | **Balance sheet:** |  | |
|  | | Cash | **4** | |
|  | | Accounts receivable (net) | **14** | |
|  | | Inventory | **39** | |
|  | | Operational assets (net) | **44** | |
|  | |  |  | |
|  | | Total assets (the base amount) | **100** | |
|  | | (rounded) |  | |
|  | | Current liabilities | **16** | |
|  | | Long-term liabilities (10% interest) | **44** | |
|  | | Common stock ($5 par) | **29** | |
|  | | Retained earnings | **12** | |
|  | |  |  | |
|  | | Total liabilities and owners' equity (the base amount) | **100** | |
|  | | (rounded) |  | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Req. 2 |  |  |  |  |
|  | a. | The average percentage markup on sales | **41.0** | % |
|  | b. | The average income tax rate | **36.4** | % |
|  | c. | The profit margin (net) | **7.4** | % |
|  | d. | The investment in operational assets | **43.7** | % |
|  | e. | The debt-to-equity | **1.5** |  |
|  | f. | The return on equity | **36.4** | % |
|  | g. | The return on assets | **16.9** | % |
|  | h. | The financial leverage percentage | **19.5** | % |

**P13–8.**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | | |
|  |  | **Ratio** | |
|  | Return on Equity | **36.37** | % |
|  | Return on Assets | **16.86** | % |
|  | Financial Leverage Percentage | **19.51** | % |
|  | Earnings Per Share | **2.33** |  |
|  | Fixed Asset Turnover | **4.58** |  |
|  | Profit Margin | **7.37** | % |
|  | Cash Ratio | **0.25** |  |
|  | Current Ratio | **3.63** |  |
|  | Quick Ratio | **1.13** |  |
|  | Receivable Turnover | **3.96** | times |
|  | Average Collection Period | **92.17** | days |
|  | Inventory Turnover | **3.03** | times |
|  | Average Days' Supply | **120.46** | days |
|  | Times Interest Earned | **5.89** |  |
|  | Debt/Equity Ratio | **1.45** |  |
|  | Price/Earnings Ratio | **12.02** |  |

**P13–9.**

Analysis

The case states that both companies are exactly alike except for the impact of the alternative methods to cost inventory. Use of LIFO (compared to FIFO), during a period of rising prices, causes (1) lower inventory amounts on the balance sheet, (2) lower net income on the income statement, and (3) a lower retained earnings balance on the balance sheet. Use of LIFO for federal income tax determination reduces both tax expense and tax liability. Inasmuch as both companies have paid their tax liabilities, the company using LIFO (Company B) will report a higher cash balance.

1. Current ratio—Company A will have a higher ratio because the inventory amount is higher under FIFO. The cash balance for Company A is less than the balance for Company B but the difference in cash balances is less than the difference in inventory amounts (because the cash difference is the inventory difference multiplied by the income tax rate).

2. Quick ratio—Company B will have a higher ratio because of the higher cash balance. The difference in inventory amounts does not affect the quick ratio because inventory is excluded from quick assets.

3. Debt/equity ratio—Company B will have a higher ratio because of reporting a lower amount of equity. LIFO results in lower net income which means that retained earnings (part of stockholders’ equity) also will be lower.

4. Return on equity—The analyst cannot be certain which company will report a higher ratio. The numerator of the ratio reflects differences for the current year and the denominator reflects differences for the current year plus all previous years. Without a quantification of the cumulative difference from previous years, it is impossible to be certain which company will have the higher ratio.

5. EPS—Company A will have a higher ratio because of reporting higher net income.

**P13–10.**

**Current ratio:**

|  |  |  |
| --- | --- | --- |
| $49,625 | = | 0.53 |
| $93,151 |  |  |

**Quick ratio:**

|  |  |  |
| --- | --- | --- |
| $32,824 | = | 0.35 |

$93,151

**Profit margin:**

|  |  |  |
| --- | --- | --- |
| $(406) | = | (0.1%) |
| $630,606 |

**Return on equity:**

|  |  |  |
| --- | --- | --- |
| $(406) | = | (2.1)% |
| ($194,411 + 189,250) ÷ 2 |

**Inventory turnover:**

|  |  |  |
| --- | --- | --- |
| $528,285 | = | 92.8 |
| ($5,827 + $5,557) ÷ 2 |

Note to instructor: We like to point out that this ratio is extremely high and ask to students to speculate about the reason. Once the class recognizes that inventory is made up of fresh food, the reason becomes obvious.

**Debt/Equity:**

|  |  |  |
| --- | --- | --- |
| $136,533 | = | 0.70 |
| $194,411 |

**Earnings per share:**

$(0.02) as reported on the income statement

**ALTERNATE PROBLEMS**

**AP13–1.**

1. Company A shows a high EPS but a low ROA. There are a number of possible explanations for this situation. The high debt/equity ratio suggests that Company A is highly leveraged and is able to generate high earnings for stockholders by using a large amount of debt financing.
2. The low level of liquidity for Company A is a concern given its high debt/equity ratio.
3. Despite a high EPS, Company A has a low price/earnings multiple. This is often an indication of limited growth opportunities or concern in the market.
4. The dividend yield for Company A is high. The company may be paying significant dividends or its stock price may be currently depressed.

**AP13–2.**

1. Company A appears to be very profitable based on both ROA and profit margin. The use of leverage has enhanced the ROA.
2. Company A’s solvency and liquidity are potential areas of concern.
3. The price/earnings multiple for Company A suggests a profitable company with good growth prospects.

**AP13–3.**

Coca-Cola is the stronger company and probably is the better investment. The biggest differences between the two companies are the P/E ratio, ROA, and the gross profit margin. Coca-Cola has a much larger P/E ratio, meaning that the market sees Coca-Cola as having more potential for growth than Pepsi. Also, the companies have similar business, but Coca-Cola’s gross profit margin is significantly higher than Pepsi’s. Coca-Cola earns more profit per dollar of sales than Pepsi does. The return on assets ratio for Coke is much better than Pepsi, but Coke does appear to have a more risky capital structure because of its higher debt-to-equity ratio. Coke pays out a higher percentage of its earnings in dividends.

**AP13–4.**

Req. 1

|  |  |  |
| --- | --- | --- |
| Name and Computation of the 2015 Ratio | | Brief Explanation of the Ratio |
|  | Tests of profitability: |  |
| (1) | Return on equity: $25,200 ÷ $109,000\* = 23.1%. \*($116,000 + $102,000) ÷ 2 = $109,000 | Measures return earned for owners based upon their investment (including retained earnings) in the business. |
|  |  |  |
| (2) | Return on assets: ($25,200 + $4,900\*) ÷ $187,500†= 16.1%. | Measures the entity’s performance in using total resources (total assets) available to it. |
|  | \*Bonds: $70,000 x 10% x .70 = $4,900  †($204,000 + $171,000) ÷ 2 = $187,500 |  |
|  |  |  |
| (3) | Financial leverage percentage:  23.1% – 16.1% = 7.0% positive | The advantage to be gained by investors when the interest rate (net of tax) is less than the return on assets. |
|  |  |  |
| (4) | Earnings per share $25,200 ÷ 10,000 shares = $2.52 | A measure of the return earned on each share of common stock outstanding. |
|  |  |  |
| (5) | Profit margin $25,200 ÷ $453,000 = 5.6% | Indicates percent of each sales dollar that was represented by income. |
|  |  |  |
| (6) | Fixed asset turnover  $453,000 ÷ [($130,000 + $120,000) ÷ 2] = 3.6 | An indication of how efficiently management is using fixed assets. |

**AP13–4. (continued)**

Req. 1 (continued)

|  |  |  |
| --- | --- | --- |
| Name and Computation of the 2015 Ratio | | Brief Explanation of the Ratio |
|  | Tests of liquidity: |  |
| (1) | Cash ratio  $6,800 ÷ $18,000 = .38 | The most stringent test of liquidity; it measures the amount of cash available to pay current liabilities. |
|  |  |  |
| (2) | Current ratio $74,000 ÷ $18,000 = 4.1 to 1 | Measures the adequacy of working capital by relating total current assets to total current liabilities. |
|  |  |  |
| (3) | Quick ratio $48,800 ÷ $18,000 = 2.7 to 1 | A severe test of liquidity by relating quick assets to total current liabilities. |
|  |  |  |
| (4) | Receivable turnover  $181,200 ÷ [$42,000 + $29,000]  2 | A measure of the effectiveness of credit granting and collection of receivables. |
|  | = 5.1 times |  |
|  | Average collection period  365 ÷ 5.1 = 71.6 days | Average number of days to collect an account receivable. |
|  |  |  |
| (5) | Inventory turnover | An indication of the velocity with which merchandise flows through the business. |
|  | $250,000 ÷ [$25,000 + $18,000] |  |
|  | 2 |  |
|  | = 11.6 times |  |
|  | Average days’ supply 365 ÷ 11.6 days = 31.4 days | Indicates, as a days of supply figure, the velocity with which merchandise flows through the business. |

**AP13–4. (continued)**

Req. 1 (continued)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name and Computation of the 2015 Ratio | | Brief Explanation of the Ratio | | |
|  | Tests of solvency and equity position: | |  |
| (1) | Times interest earned  ($25,200 + $10,800 + $7,000) ÷ $7,000 = 6.1 | | A measure of the amount of earnings available to cover interest expense. |
|  |  | |  |
| (2) | Debt/equity ratio $88,000 ÷ $116,000 = .76 | | Measures relationship between resources provided by owners versus resources provided by creditors. |
|  |  | |  |
|  | Market tests: | |  |
| (1) | Price/earnings ratio $18 ÷ $2.52 = 7.1 | | A measure of the earnings of a company that may benefit the investor directly or indirectly. It is the ratio of current market price of the stock to the EPS. |
| (2) | Dividend yield ratio $0.45 ÷ $18 = 2.5% | | Measures cash return to the stockholder from dividends in relationship to the current market price of the stock. |

Req. 2

(a) The financial leverage percentage indicates that an advantage was earned for the stockholders because the company earned a higher return on total resources used compared to the interest paid on debt (after tax).

(b) The profit margin was more than 5% of net sales. This means that the business earned more than $.05 profit on each sales dollar. Whether it is “good” can be determined reasonably by comparing it with standards such as (a) prior years, (b) industry averages, (c) projections (planned), and (d) published averages.

(c) The current ratio is high and is more than the quick ratio because the latter ratio is a much more severe test of liquidity (it omits inventory and prepaid expenses). Each of these ratios probably would be “good” when compared with some standard (such as those listed in (b) above). However, there appears to be a severe liquidity problem that these two ratios do not divulge; that is, the extremely low amount of cash.

(d) There appears to be a credit and collection deficiency. The receivable collection period of over 70 days compared with the 30-day credit terms indicates more uncollected accounts than should be expected.

**AP13–5.**

Req. 1

a. Tests of profitability:

(1) Return on equity: $12,600 ÷ $120,500 = 10.5%.

(2) Return on assets: [$12,600 + ($4,000 x .70)] ÷ $199,750 = 7.7%.

(3) Financial leverage percentage: 10.5% – 7.7% = 2.8% positive (in favor of stockholders).

(4) Earnings per share: $12,600 ÷ 18,000 shares = $0.70.

(5) Profit margin: $12,600 ÷ $110,000 = 11.5%.

(6) Fixed asset turnover: $110,000 ÷ $100,000 = 1.1.

b. Tests of liquidity:

(7) Cash ratio: $49,500 ÷ $43,000 = 1.2

(8)Current ratio: $111,500 ÷ $43,000 = 2.6 to 1.00.

(9) Quick ratio:$86,500 ÷ $43,000 = 2.0 to 1.00.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| (10) | Receivable turnover*:* $55,000 ÷ |  | $32,000 + $37,000 |  | = | 1.6 times |
|  |  |  | 2 |  |  |  |

Average days to collect: 365 ÷ 1.6 = 228 days.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| (11) | Inventory turnover:$52,000 ÷ |  | $38,000 + $25,000 |  | = | 1.7 times |
|  |  |  | 2 |  |  |  |

Days’ supply in inventory: 365 ÷ 1.7 = 215 days.

c. Tests of solvency:

(12) Times interest earned: ($12,600 + $4,000 + $5,400) ÷ $4,000 = 5.5

(13) Debt/equity ratio*:* $83,000 ÷ $123,500 = .67.

d. Market tests:

(14) Price/earnings ratio:$23 ÷ $0.70 = 32.9 times.

1. Dividend yield:$.75 ÷ $23 = 3.3%.

**AP13–5. (continued)**

Req. 2

|  |  |  |  |
| --- | --- | --- | --- |
| a. | Sales revenue |  | ($110,000 – $99,000) ÷ $99,000 = 11.1% |
| gt | Net income |  | ($12,600 – $9,800) ÷ $9,800 = 28.6% |
|  | Cash |  | ($49,500 – $18,000) ÷ $18,000 = 175% |
|  | Inventory |  | ($25,000 – $38,000) ÷ $38,000 = (34.2%) |
|  | Debt |  | ($83,000 – $75,500) ÷ $75,500 = 9.9% |

b. Pretax interest rate on the long-term note: $4,000 ÷ $40,000 = 10%.

Req. 3

Potential problems are:

1. Average collection period of 228 days—long compared with the 30-day credit period.

2. Inventory turnover 1.7 (i.e., 215 days)—long shelf life for most businesses.

3. Increase in accounts payable, nearly 20% from 2014 to 2015, is material in amount; investigate the cause.

4. There was a significant increase in the amount of cash reported on the balance sheet. Investigate why management wants to hold extra cash.

**AP13–6.**

Req. 1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Ratio |  | *2014* | |  | *2015* | |  | *2016* | |  | *2017* | |
| a. | Profit margin % |  | (18%) | ) |  | 8% |  |  | 15% |  |  | 11% |  |
| b. | Gross profit ratio |  | 36% |  |  | 39% |  |  | 31% |  |  | 38% |  |
| c. | Expenses as a % of sales excluding  cost of goods sold |  | 55% |  |  | 32% |  |  | 16% |  |  | 27% |  |
| d. | Inventory turnover |  | 4.7 |  |  | 3.1 |  |  | 3.2 |  |  | 2.5 |  |
| e. | Days’ supply in inventory |  | 78 |  |  | 118 |  |  | 114 |  |  | 146 |  |
| f. | Receivable turnover |  | 6.0 |  |  | 4.3 |  |  | 4.0 |  |  | 3.6 |  |
| g. | Average days to collect |  | 61 |  |  | 85 |  |  | 91 |  |  | 101 |  |

Computations:

a. Profit margin: 2014, ($8) ÷ $44 = (18%); 2015, $5 ÷ $66 = 8%; 2016, $12 ÷ $80 = 15%; 2017, $11 ÷ $100 = 11%.

b. Gross profit ratio: 2014, ($44 – $28) ÷ $44 = 36%; 2015, ($66 – $40) ÷ 66 = 39%; 2016, ($80 – $55) ÷ $80 = 31%; 2017, ($100 – $62) ÷ $100 = 38%.

c. Expense percent of sales revenue: 2014, ($44 – $28 + $8) ÷ $44 = 55%; 2015, ($66 – $40 – $5) ÷ $66 = 32%; 2016, ($80 – $55 – $12) ÷ $80 = 16%; 2017, ($100 – $62 – $11) ÷ $100 = 27%.

d. Inventory turnover: 2014, $28 ÷ [($0 + $12) ÷ 2] = 4.7; 2015, $40 ÷ [($12 + $14) ÷ 2] = 3.1; 2016, $55 ÷ [($14 + $20) ÷ 2] = 3.2; 2017, $62 ÷ [($20 + $30) ÷ 2] = 2.5.

e. Days’ supply in inventory: 2014, 365 ÷ 4.7 = 78; 2015, 365 ÷ 3.1 = 118; 2016, 365 ÷ 3.2 = 114; 2017, 365 ÷ 2.5 = 146.

f. Receivable turnover: 2014, $33 ÷ [($0 + $11) ÷ 2] = 6.0; 2015, $49.5 ÷ [($11 + $12) ÷ 2] = 4.3; 2016, $60 ÷ [($12 + $18) ÷ 2] = 4.0; 2017, $75 ÷ [($18 + $24) ÷ 2] = 3.6.

g. Average days to collect: 2014, 365 ÷ 6.0 = 61; 2015, 365 ÷ 4.3 = 85; 2016, 365 ÷ 4.0 = 91; 2017, 365 ÷ 3.6 = 101.

**AP13–6. (continued)**

Req. 2

Revenue increased steadily each year. During the first years, profit margin increased, but it decreased in the last year. Gross profit changed each year, but increased the final year. Average markup changed each year, but expenses as a percent of sales decreased each year with the exception of the last year. **Recommendation:** management should work to reverse the downward trend of income by increasing margin and reducing expenses.

Req. 3

The inventory turnover ratio (and days’ supply) reflect instability. This effect is even more pronounced when the turnover ratio is compared with the gross profit ratio and the profit margin ratio. These comparisons strongly suggest that inventory control (i.e., the amount of goods to stock) is seriously lacking. Recall that the higher the inventory turnover (and the lower the days’ supply) the higher the profit margin.

The receivable turnover ratio (and the average days to collect) for all years is in excess of what would be expected with credit terms of net 30 days. These ratios vary significantly with a deteriorating trend over the period, which suggests considerable inefficiencies in credit and collections.

Recommendation: That the management carefully assess the inventory situation and the credit and collection activities with a view to developing policies which will lead to the (a) determination of optimum inventory levels (to increase the inventory turnover ratio), and (b) optimum efficiency in the credit and collections activities (to increase the receivable turnover ratio and reduce the average days to collect).

**CASES AND PROJECTS**

*FINANCIAL REPORTING AND ANALYSIS CASES*

**CP13–1.**

**American Eagle**

**Return on equity:**

|  |  |  |
| --- | --- | --- |
| $151,705 | = | 11.0% |
| ($1,416,851 + $1,351,071) ÷ 2 |

**Earnings per share:**

As reported $0.78

**Profit margin:**

|  |  |  |
| --- | --- | --- |
| $151,705 | = | 4.8% |
| $3,159,818 |

**Current ratio:**

|  |  |  |
| --- | --- | --- |
| $1,287,488 | = | 3.2 |
| $405,401 |

**Inventory turnover:**

|  |  |  |
| --- | --- | --- |
| $2,031,477 | = | 6.0 |
| ($378,426 + $301,208) ÷ 2 |

**Debt/Equity**

|  |  |  |
| --- | --- | --- |
| $405,401 + $128,550 | = | .38 |
| $1,416,851 |

**Price earnings:**

|  |  |  |
| --- | --- | --- |
| $20 | = | 25.6 |
| $0.78 |

**Dividend yield:**

|  |  |  |
| --- | --- | --- |
| $0.44 | = | 2.2% |
| $20 |

**CP13–2.**

**Urban Outfitters**

**Return on equity:**

|  |  |  |
| --- | --- | --- |
| $185,251 | = | 15.0% |
| ($1,066,268 + $1,411,548) ÷ 2 |

**Earnings per share:**

As reported $1.20

**Profit margin:**

|  |  |  |
| --- | --- | --- |
| $185,251 | = | 7.5% |
| $2,473,801 |

**Current ratio:**

|  |  |  |
| --- | --- | --- |
| $596,992 | = | 2.6 |
| $233,466 |

**Inventory turnover:**

|  |  |  |
| --- | --- | --- |
| $1,613,265 | = | 6.7 |
| ($250,073 + $229,561) ÷ 2 |

**Debt/Equity:**

|  |  |  |
| --- | --- | --- |
| $417,440 | = | 0.39 |
| $1,066,268 |

**Price/earnings:**

|  |  |  |
| --- | --- | --- |
| $35 | = | 29.2 |
| $1.20 |

**Dividend yield:**

|  |
| --- |
| 0% (No dividends were paid) |

**CP13–3.**

For calculations, see CP13–1, CP13–2, and Appendix D.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Urban Outfitters** | **American Eagle** | **Industry Average** |
| Return on equity | 15.0% | 11.0% | 13.6% |
| Earnings per share | $1.20 | $0.78 | N/A |
| Profit margin | 7.5% | 4.8% | 5.4% |
| Current ratio | 2.6 | 3.2 | 2.7 |
| Inventory turnover | 6.7 | 6.0 | 4.9 |
| Debt/Equity | .39 | .38 | .70 |
| Price earnings | 29.2 | 25.6 | 16.1 |
| Dividend yield | 0% | 2.2% | 1.5% |

**CP13–4.**

**Case 1:**

|  |  |  |
| --- | --- | --- |
| ROE | = | Net Income |
| Average Stockholders’ Equity |

|  |  |  |
| --- | --- | --- |
| 10% | = | $200,000 |
| Average Stockholders’ Equity |

Average Stockholders’ Equity = $2,000,000

**Case 2:**

|  |  |  |
| --- | --- | --- |
| Asset Turnover | = | Net Sales |
| Average Total Assets |

|  |  |  |
| --- | --- | --- |
| 8 | = | $8,000,000 |
| Average Total Assets |

Average Total Assets = $1,000,000

**CP13–4. (continued)**

**Case 3:**

|  |  |  |
| --- | --- | --- |
| Asset Turnover | = | Net Sales |
| Average Total Assets |

|  |  |  |
| --- | --- | --- |
| 5 | = | Net Sales |
| $1,000,000 |

Net Sales = $5,000,000

|  |  |  |
| --- | --- | --- |
| Net Profit Margin | = | Net Income |
| Net Sales |

|  |  |  |
| --- | --- | --- |
| 10% | = | Net Income |
|  |  | $5,000,000 |

Net Income = $500,000

|  |  |  |
| --- | --- | --- |
| ROE | = | Net Income |
| Average Stockholders’ Equity |

|  |  |  |
| --- | --- | --- |
| 15% | = | $500,000 |
| Average Stockholders’ Equity |

Average Stockholders’ Equity = $3,333,333

**Case 4:**

|  |  |  |
| --- | --- | --- |
| Asset Turnover | = | Net Sales |
|  |  | Average Total Assets |

|  |  |  |
| --- | --- | --- |
| 5 | = | $1,000,000 |
|  |  | Average Total Assets |

Average Assets = $200,000

**CP13–5.**

The two areas where we would expect the largest difference are profit margin and asset turnover. We would expect the “high quality” company to have higher margins. The “low cost” company could produce high returns to the owners.

*CRITICAL THINKING CASES*

**CP13–6.**

Although the amount of working capital was unchanged, the current ratio for Barton Company increased as a result of paying $420,000 to the trade creditors:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Before |  |  |  | After |  |  |
| Current assets |  | $1,900,000 | = | 1.77 |  | $1,480,000 | = | 2.26 |
| Current liabilities |  | $1,075,000 |  | $655,000 |
|  |  |  |  |  |  |  |  |  |
| Working capital |  | $ 825,000 |  |  |  | $825,000 |  |  |

The current ratio has increased to an amount that is considered to be acceptable by First Federal Bank, but it appears that the increase is mere “window dressing.” Total working capital was unaffected by the transaction. In the process of improving the current ratio, Barton Company created a potential cash crisis. The cash balance was reduced to $10,000 ($430,000 – $420,000) compared with current liabilities of $655,000. First Federal should deny the second loan request.

A more fundamental point concerns the validity of the 2:1 criterion imposed by First Federal. The case illustrates the ease with which some ratios can be manipulated. Usually a rigid cut-off point is not advisable for ratio analysis.

*FINANCIAL REPORTING AND ANALYSIS PROJECTS*

**CP13–7.**

The response to this question will depend on the companies selected by the students.

*CONTINUING CASE*

**CC13–1.**

This case is designed to give students experience in looking up financial information and using it for analysis. Because the students are instructed to use the current Pool report, we cannot provide a solution.