

Chapter 2 Understanding Financial Statements

Financial Statement

2.1

(a)

- $\text{Current assets} = \$150,000 + \$200,000 + \$150,000 + \$50,000 + \$30,000 = \$580,000$
- $\text{Current liabilities} = \$50,000 + \$100,000 + \$80,000 = \$230,000$
- $\text{Working capital} = \$580,000 - \$230,000 = \$350,000$
- $\text{Shareholder's equity} = \$100,000 + \$150,000 + \$150,000 + \$70,000 = \$470,000$

(b) $\text{EPS} = \$500,000 / 10,000 = \50 per share

(c) $\text{Par value} = \$15$; $\text{capital surplus} = \$150,000$;

$\text{Market price} = \$15 + \$15 = \$30$ per share

2.2

(a) $\text{Working capital} = \text{Current assets} - \text{Current liabilities}$;

$\text{Working capital requirements} = \text{Changes in current assets} - \text{Changes in current liabilities}$

$\text{WC req.} = (+\$100,000 - \$20,000) - (+\$30,000 - \$40,000) = \$90,000$

(b) $\text{Taxable income} = \$1,500,000 - \$650,000 - \$150,000 - \$20,000 = \$680,000$

(c) $\text{Net income} = \$680,000 - \$272,000 = \$408,000$

(d) Net cash flow:

A. $\text{Operating activities} = \text{net income} + \text{depreciation} - \text{W.C. required} = \$408,000 + \$200,000 - \$90,000 = \$518,000$

B. $\text{Investing activities} = \text{equipment purchase} = (\$400,000)$

C. $\text{Financing activities} = \text{borrowed funds} = \$200,000$

D. $\text{Net cash flow} = \$518,000 - \$400,000 + \$200,000 = \$318,000$

2.3

(a)

$$ROE_A = \frac{168}{800} = 21\%$$

$$ROE_B = \frac{240}{400} = 60\%$$

$$ROA_A = \frac{168 + 20(1 - 0.4)}{1,000} = 18\%$$

$$ROA_B = \frac{240 + 160(1 - 0.4)}{2,000} = 16.8\%$$

(b) Because company has higher income but less equity than that of company A. No, it is just one criterion, so we cannot say that. Further investigation must be conducted.

(c)

$$ROE_{merge} = \frac{408}{1200} = 34\%$$

Merge and Acquisition situation between companies A and B.

2.4

(a) Debt ratio = $\$83,451,000 / \$207,000,000 = 40.31\%$

(b) Time-interest-earned ratio: N/A

(c) Current ratio = $\$73,286,000 / \$43,658,000 = 1.68$ times

(d) Quick ratio = $(\$73,286,000 - \$1,764,000) / \$43,658,000 = 1.64$ times

(e) Inventory-turnover ratio = $\$170,910,000 / [(\$1,764,000 + \$791,000) / 2] = 133.78$ times

(f) DSO = $(\$24,094,000) / (\$170,910,000 / 365) = 51.46$ days

(g) Total-assets-turnover ratio = $\$170,910,000 / \$207,000,000 = 0.83$ times

(h) Profit margin on sales = $\$37,037,000 / \$170,910,000 = 21.67\%$

(i) Return on Total assets = $\frac{\$37,037,000 + \$0}{(\$207,000,000 + \$176,064,000) / 2} = 19.34\%$

(j) Return on Common equity

$$= \frac{\$37,037,000}{(\$123,549,000 + \$118,210,000) / 2} = 30.64\%$$

(k) Price-earnings ratio = \$68.11 / (\$37,037,000,000 / 6,030,000,000) = \$11.08
 (Note: The *average* total number of outstanding shares in year 2013: 6.03B)

(l) Book value per share = (\$123,549,000 – 0) / 6,030,000 = \$20.49

2.5

(a) Debt ratio = \$34,102,000 / \$92,358,000 = 36.92%

(b) Time-interest-earned ratio = \$50,155,000 / \$0 = N/A

(c) Current ratio = \$32,084,000 / \$13,568,000 = 2.36 times

(d) Quick ratio = (\$32,084,000 - \$4,172,000) / \$13,568,000 = 2.06 times

(e) Inventory-turnover ratio = $\frac{\$170,910,000}{(\$4,172,000 + \$4,734,000) / 2} = 38.38 \text{ times}$

(f) DSO = (\$6,176,000) / (\$170,910,000 / 365) = 13.19 days

(g) Total-assets-turnover ratio = \$170,910,000 / \$92,358,000 = 1.85 times

(h) Profit margin on sales = \$37,037,000 / \$170,910,000 = 21.67%

(i) Return on total assets = $\frac{\$37,037,000 + \$0}{(\$92,358,000 + \$84,351,000) / 2} = 41.92\%$

(j) Return on common equity = $\frac{\$37,037,000}{(\$58,256,000 + \$51,203,000) / 2} = 67.67\%$

(k) Price-earnings ratio = \$25.50 / (\$37,037,000 / 4,980,000) = \$3.43
 (Note: The *average* total outstanding number of shares in year 2013 was 4,980M)

(l) Book value per share = \$58,256,000 / 4,980,000 = **\$11.70**

2.6

Given R.C.'s EPS = \$12 per share; Cash dividend = \$6 per share; Book value per share = \$80; Changes in the retained earnings = \$42 million; Total debt = \$240 million; Find debt ratio = total debt/total assets

$$\text{EPS} = \frac{\text{Net Income}}{X} = \$12$$

where X = the number of outstanding shares

$$\text{Book value} = \frac{\text{Total shareholders' equity}}{X} = \$80$$

Retained earnings = Net income – Cash dividend; Net income = $12X$ from EPS relationship and the total cash dividend = $6X$, so we rewrite $12X - 6X = \$42$ million, or $X = 7$ million shares

From book value per share, we know that total shareholders' equity = $80X$, or \$560 million; Total assets = Total liabilities + Total shareholders' equity = \$240 million + \$560 million = \$800 million

$$\text{Debt ratio} = \$240 \text{ million} / \$800 \text{ million} = 30\%$$

2.7 (a)

2.8 (c)

2.9 (b)

$$2.10 \text{ (c) Return on (common) equity} = \frac{\text{Net income}}{\text{Average common equity}} = \frac{\$418}{\$550}$$

2.11

- Accounts receivable = Average collection period \times Sales/365
 $= 73 \text{ days} \times (\$50,200/365 \text{ days}) = \$10,040.$
- Current assets = (Cash and marketable securities) + (Accounts receivable) + Inventory = \$5,000 + \$10,040 + \$8,750 = \$23,790.
- Long-term debt = (Total assets) – (Current liabilities) – (Common equities)
 $= (\text{Fixed assets} + \text{Current assets}) - (\text{Current assets}/\text{Current ratio}) - (\text{Common equities})$
 $= (\$16,500 + \$23,790) - (\$23,790/2.8) - \$25,000$
 $= \$40,290 - \$8,496.43 - \$25,000$
 $= \$6,793.57$

- Total assets turnover = Sales/Total assets = \$50,200/(\$16,500 + \$23,790) = 1.25 times

2.12

(a) Find Tiger's accounts receivable.

$$DSO = 91.25 = \frac{AR}{200,000 / 365} \Rightarrow AR = \$50,000$$

(b) Determine the amount of current liabilities.

$$CA = Cash + Inventory + AR = \$10,000 + \$150,000 + \$50,000 = \$210,000$$

$$Current\ Ratio = 4.2 = \frac{\$210,000}{Current\ Liabilities} \Rightarrow Current\ Liabilities = \$50,000$$

(c) Calculate the amount of the long-term debt.

$$Total\ Asset = Current\ Asset + Fixed\ Asset = \$210,000 + \$90,000 = \$300,000$$

$$\$300,000 = (\$50,000 + Long\ term\ debt) + \$200,000$$

$$\Rightarrow Long\ term\ debt = \$50,000$$

(d) Calculate the Return on Common Equity.

$$ROE = \frac{net\ income}{equity} = \frac{\$15,000}{\$200,000} = 0.075 \Rightarrow 7.5\%$$

2.13

(a) Find Fisher's accounts receivable.

$$DSO = \frac{AR}{1,200 / 365} \rightarrow AR = 147.95M$$

(b) Calculate the amount of current assets.

$$CA = cash + Inv. + AR = 100 + 180 + 147.95 = 427.95M$$

(c) Determine the amount of current liabilities.

$$CR = 3.2 = \frac{CA}{CL} = \frac{427.95}{CL} \rightarrow CL = 133.73M$$

(d) Determine the amount of total assets.

$$TA = CA + FA = 427.95 + 280 = 707.95M$$

(e) Calculate the amount of the long-term debt.

$$707.95 = (133.73 + LB) + 500 \rightarrow LB = 74.22M$$

(f) Calculate the profit margin.

$$profit\ margin = \frac{net\ income}{sales} = \frac{358}{1,200} = 29.83\%$$

(g) Calculate the Return on Common Equity

$$ROE = \frac{net\ income}{equity} = \frac{358}{500} = 71.6\%$$

ST2.1

Not provided

ST2.2

Not provided

ST2.3

Not provided