Chapter 2: Accounting and Financial Decision Making

Financial Statement

2.1

(a)

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

(b) EPS = $500,000/10,000 = $50 per share

(c) Par value = $15; capital surplus = $150,000;
Market price = $15 + $15 = $30 per share

2.2

(a) Working capital = Current assets – Current liabilities;
Working capital requirements = Changes in current assets (except Cash) – Changes in current liabilities
WC req. = (+$100,000 - $20,000) – (+$30,000 - $40,000) = $90,000

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

(c) Net income = $680,000 - $272,000 = $408,000

(d) Net cash flow:

A. Operating activities = net income + depreciation – W.C. required = $408,000 + $200,000 - $90,000 = $518,000
B. Investing activities = equipment purchase = ($400,000)
C. Financing activities = borrowed funds = $200,000
D. Net cash flow = $518,000 - $400,000 + $200,000 = $318,000

2.3

(a)

$$\text{ROE}_A = \frac{168}{800} = 21\%$$

$$\text{ROE}_B = \frac{240}{400} = 60\%$$

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

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

(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)

$$\text{ROE}_{merge} = \frac{408}{1200} = 34\%$$

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 $= \frac{\$170,910,000}{(\$4,172,000 + \$4,734,000)/2} = 38.38$ 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 = $8 per share; Cash dividend = $4 per share; Book value per share = $80; Changes in the retained earnings = $24 million; Total debt = $240 million; Find debt ratio = total debt/total assets

$$EPS = \frac{\text{Net Income}}{X} = \$8$$

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 = 8X from EPS relationship and the total cash dividend = 4X, so we rewrite 8X – 4X = $24 million, or X = 6 million shares

From book value per share, we know that total shareholders' equity = 80X, or $480 million; Total assets = Total liabilities + Total shareholders' equity = $240 million + $480 million = $720 million

Debt ratio = $240 million/$720 million = 33.33%

2.7 (b)

2.8 (b)

2.9 (d)

2.10 (b)

2.11

- Accounts receivable = DSO × Sales/365 = 40 days ×($20,500)/365 days) = $2,246.57
- Current assets = (Cash and marketable securities) + (Accounts receivable) + Inventory = $2,000 + $2,246.57 + $3,250 = $7,496.57
- Long-term debt = (Total assets) – (Current liabilities) – (Common equities) = ($7,496.57 + $6,500) – (current assets/current ratio) - $10,000 = $1,319.22

- Total assets turnover = Sales/Total assets = $20,500/($7,496.57 + $6,500) = 1.46 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.

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

(b) Calculate the amount of current assets.

$$CA = cash + Inv. + AR = 100 + 180 + 147.95 = \mathbf{427.95M}$$

(c) Determine the amount of current liabilities.

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

(d) Determine the amount of total assets.

$$TA = CA + FA = 427.95 + 280 = \mathbf{707.95M}$$

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

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

(f) Calculate the profit margin.

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

(g) Calculate the Return on Common Equity

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

ST2.1

Not provided

ST2.2

Not provided

ST2.3

Not provided