Problem 21-37

Additional information:

All sales were made on account

Each share of preferred stock is convertible into five shares of common stock

The market price/share of common stock is $50

$50,000 shares of common stock were issued on January 1, 20x1.

Therefore the weighted-average number of shares during 20x1 was 600

Compute each of the following amounts or ratios for 20x1

(1) Working capital = Current assets – Current liabilities
\[
\text{Working capital} = \frac{8,395}{2,880} = 2.91
\]

(2) Current ratio = Current assets ÷ Current liabilities
\[
\text{Current ratio} = \frac{8,395}{2,880} = 2.91
\]

(3) Quick assets = Cash + Marketable securities + Accounts receivable
\[
\text{Quick assets} = \frac{200}{120} + \frac{3,000}{3,000} = 3,320
\]

(4) Acid-test ratio = Quick assets ÷ Current liabilities
\[
\text{Acid-test ratio} = \frac{3,320}{2,880} = 1.15
\]

(5) Accounts receivable turnover = Sales on account ÷ Average accounts receivable
\[
\text{Accounts receivable turnover} = \frac{26,700}{[(3,000 + 2,500)/2]} = \frac{26,700}{2,750} = 9.71 \text{ times}
\]

(6) Average collection period = 365 ÷ Accounts receivable turnover
\[
\text{Average collection period} = 365 + 9.71 = 37.6 \text{ days}
\]

(7) Inventory turnover = Cost of goods sold ÷ Average inventory
\[
\text{Inventory turnover} = \frac{18,000}{[(5,000 + 4,200)/2]} = \frac{18,000}{4,600} = 3.91 \text{ times}
\]

(8) Average days/inventory turnover = 365 ÷ Inventory turnover
\[
\text{Average days/inventory turnover} = 365 ÷ 3.91 = 93.4 \text{ days}
\]

(9) Number of bonds outstanding = $9,000 ÷ $1,000 = 9
Number of shares of P/S outstanding = $1,500 ÷ $10 par = 15
Number of shares of C/S outstanding = $6,000 ÷ $10 par = 600

(10) Book Value of securities

(a) Per bond = (Total assets – Current liabilities) ÷ # of Bonds
\[
\text{Per bond} = \frac{[31,845 - 2,880]}{9} = \frac{28,965}{9} = 3,218
\]

(b) Per share P/S = (Assets – Liabilities) ÷ # shares P/S
\[
\text{Per share P/S} = \frac{[31,845 - 11,880]}{15} = \frac{19,965}{15} = 1,331
\]

(c) Per share C/S = (SHE – P/S) ÷ # shares C/S
\[
\text{Per share C/S} = \frac{[19,965 - 1,500]}{600} = \frac{18,465}{600} = 30.78
\]
Problem 21-37 (continued)

(11) Capitalization Ratios

\[
\text{SHE} + \text{Bonds} = $19,965 + $9,000 = $28,965 \\
\text{Bonds} = $9,000 + $28,965 = 31.1\% \\
\text{Preferred stock} = ($6,000 + $1,000 + $11,465) + $28,965 = 63.7\% \\
\]

(12) Debt-equity ratio

\[
\text{Debt-equity ratio} = \frac{$11,880 + $19,965}{.60} \\
\]

(13) Interest coverage

\[
\text{Interest coverage} = \frac{$6,900}{900} = 7.7 \text{ times} \\
\]

(14) Coverage of dividends on P/S

\[
\text{Coverage of dividends on P/S} = \frac{$4,200 + (8\% \times $1,500)}{120} = 35 \text{ times} \\
\]

(15) Earnings per share

\[
\text{Earnings per share} = \frac{$4,080 + 600 \times $6.80}{600} = $6.80/\text{share} \\
\]

(16) Diluted earnings per share

\[
\text{Diluted earnings per share} = \frac{\text{Net income} + \text{# shares C/S outstanding}}{\text{Average total assets}} \\
\text{Diluted earnings per share} = \frac{$4,200 + [600 + (15 \times 5)] \times $4,200 + 675}{6.22} \\
\]

(17) Return on assets

\[
\text{Return on assets} = \frac{(\text{Net income} + \text{interest expense net of tax})}{\text{Average total assets}} \\
\text{Return on assets} = \frac{[$4,200 + (900 \times .70)] + ([$31,845 + $27,520]/2)}{[$4,830 + $29,562.5]} = 16.3\% \\
\]

(18) Return on equity

\[
\text{Return on equity} = \frac{\text{Net income available to C/S}}{\text{Average C/S equity}} \\
\text{Return on equity} = \frac{$4,080 + [(19,965 - $1,500) + ($16,220 - $1,500)]/2}{16,592.5} = 24.6\% \\
\]

(19) Return on sales

\[
\text{Return on sales} = \frac{$4,200 + $26,700}{15.7\%} \\
\]

(20) Dividend payout ratio

\[
\text{Dividend payout ratio} = \frac{\text{Dividends}/\text{share of C/S}}{\text{EPS}} \\
\text{Dividend payout ratio} = \frac{($935/600)}{6.80} = 22.9\% \\
\]

(21) Dividend yield ratio

\[
\text{Dividend yield ratio} = \frac{\text{Dividends}/\text{share of C/S}}{\text{Market price/\text{share}}} \\
\text{Dividend yield ratio} = \frac{($935/600)}{50} = 3.1\% \\
\]