FIN104 Tutorial Answers- Week 3

1. Financial Statements. Henry Josstick has just started his first accounting course and has pre- pared the following balance sheet and income statement for Omega Corp. Unfortunately, although the data for the individual items are correct, he is very confused as to whether an item should go in the balance sheet or income statement and whether it is an asset or liability. Help him by rearranging the items and filling in the blanks. (CH3.Q8)

<u>Answer</u>： See answers in financial statements.

Balance Sheet			
Assets		Liabilities & Shareholders' EquityShareholders' Equity	
Cash	15	Debt due for repayment	25
Receivables	35	Payables	35
Inventories	50	Total current liabilities	60
Total current assets	100		
		Long- term debt	350
Property, plant and equipment	520	Total liabilities	410
Less accumulate ddepreciation	120	Shareholders' equity	90
Net fixed assets	400		
Total assets	500	Total liabilities and shareholders' equity	500

Income Statement	
Net sales	700
Cost of goods sold	580
Selling, G & A expenses	38
Depreciation	12
EBIT	70
Interest expense	25
Taxable income	45
Taxes	15
Net Income	30

2. Balance Sheet. Balance sheet items are usually entered in order of declining liquidity. Place each of the terms below in the appropriate place in the following balance sheet (CH3.Q2).

Accounts payable	Total current assets
Net fixed assets	Accounts receivable
Debt due for repayment	Total current liabilities
Cash and marketable securities	Inventories
Equity	Long-term debt

Assets	Liabilities and equities
a.	f.
b.	g.
c.	h.

d.	i.
e.	g.
Total Asset	Total liabilities and equities

Assets	**Liabilities and equities**
a. Cash and marketable securities	f. Debt due for repayment
b. Accounts receivable	g. Accounts payable
c. Inventories	h**. Total current Liabilities**
d. **Total current assets**	i. Long-term debt
e. Net fixed assets	g. **Equity**
Total Asset	Total liabilities and equities

3. Financial Statements. South Sea Baubles has the following (incomplete) balance sheet and income statement (CH3.Q6).

BALANCE SHEET AT END OF YEAR (Figures in $ millions)					
Assets	2018	2019	Liabilities and Shareholder's equity	2018	2019
Current Assets	90	140	Current liabilities	50	60
Net fixed assets	800	900	Long-term debt	600	750

a. What is shareholders 'equity in 2018?

Shareholders’ equity = total assets – total liabilities

2018: Shareholders’ equity = \$890 – \$650 = \$240

b. What is shareholders ’equity in 2019?

2019: Shareholders’ equity = \$1,040 – \$810 = \$230

c. What is net working capital in 2018?

Net working capital = current assets - current liabilities
2018: Net working capital = \$90-\$50 = \$40

d. What is net working capital in 2019?

2019: Net working capital = \$140 -\$60 = \$80

e. What are taxes paid in 2019? Assume the firm pays taxes equal to 21% of taxable income.

Taxable income = \$1,950 -\$1,030 -\$350 -\$240 = \$330
Taxes paid = 0.21 *\$330 = \$69.30
Net income = \$260.70

f. What is cash provided by operations during 2019? Pay attention to changes in net working capital, using Table 3.4 as a guide.

Net income	\$260.70
Depreciation	350.00

Decrease (increase) in current assets	(50.00)
Increase in current liabilities	10.00
Cash provided by operations	$570.70

g. **Net fixed assets increased from $800 million to $900 million during 2019. What must have been South Sea's *gross* investment in fixed assets during 2019?**

   Gross investment = increase in net fixed assets + depreciation = $100 + $350 = $450

h. **If South Sea reduced its outstanding accounts payable by $35 million during the year, what must have happened to its other current liabilities?**

Current liabilities increased by $10. Therefore, current liabilities other than accounts payable must have increased by $45.

4. Market Value Added. Here is a simplified balance sheet for Locust Farming (CH4.Q1):

Current assets	$42,524	Current liabilities	$29,755
Long-term assets	46,832	Long-term debt	27,752
		Other liabilities	14,317
		Equity	17,532
Total	$89,356	Total	$89,356

Locust has 657 million shares outstanding with a market price of $83 a share.

a. **Calculate the company's market value added.**

   Market value = 657 mil × \$83 = \$54,531 million

   Market value added = 54,531 – 17,532 = \$36,999 million

b. **Calculate the market-to-book ratio.**

   Market / book = 54,531 / 17,532 = 3.11

c. **How much value has the company created for its shareholders as a percent of shareholders 'equity, that is, as a percent of the net capital contributed by shareholders)**?

   The company has increased the value of the equity investment by \$36,999 million, which is 211% of shareholders' equity on the balance sheet.

5. Financial Ratios. Here are simplified financial statements for Phone Corporation in 2017(CH4.Q7):

BALANCE SHEET (Figures in $ millions)	End of Year	Start of Year
Assets		
Cash and marketable securities	$ 89	$ 158
Receivables	2,382	2,490
Inventories	187	238
Other current assets	867	932
Total current assets	$ 3,525	$ 3,818
Net property, plant, and equipment	19,973	19,915
Other long-term assets	4,216	3,770
Total assets	$27,714	$27,503
Liabilities and shareholders' equity		
Payables	$ 2,564	$ 3,040
Short-term debt	1,419	1,573
Other current liabilities	811	787
Total current liabilities	$ 4,794	$ 5,400
Long-term debt and leases	7,018	6,833
Other long-term liabilities	6,178	6,149
Shareholders' equity	9,724	9,121
Total liabilities and shareholders' equity	$27,714	$27,503

INCOME STATEMENT (Figures in $ millions)	
Net sales	$13,193
Cost of goods sold	4,060
Other expenses	4,049
Depreciation	2,518
Earnings before interest and taxes (EBIT)	$ 2,566
Interest expense	685
Income before tax	$ 1,881
Taxes (at 35%)	658
Net income	$ 1,223
Dividends	856

Calculate the following financial ratios for Phone Corporation using the methodologies listed

for each part:

a. Return on equity (use average balance sheet figures)

$$\text{Return on equity} = \frac{1{,}223}{(9{,}724 + 9{,}121)/2} = 0.129796 = 13\%$$

b. Return on assets (use average balance sheet figures)

$$\text{Return on assets} = \frac{1{,}223 + 685 \times (1 - .35)}{(27{,}714 + 27{,}503)/2} = 0.0604 = 6.04\%$$

c. Return on capital (use average balance sheet figures)

$$\text{Return on capital} = \frac{1{,}223 + 685 \times (1 - .35)}{[(7{,}018 + 9{,}724) + (6{,}833 + 9{,}121)]/2} = 0.1020 = 10.20\%$$

d. Days in inventory (use start-of-year balance sheet figures)

$$\text{Days sales in inventory} = \frac{238}{4{,}060/365} = 21.40 \text{ days}$$

e. Inventory turnover (use start-of-year balance sheet figures)

Inventory turnover = 4060/283 = 14.35

f. Average collection period (use start-of-year balance sheet figures)

$$\text{Average collection period} = \frac{2{,}490}{13{,}193/365} = 68.89 \text{ days}$$

g. Operating profit margin

$$\text{Operating profit margin} = \frac{1{,}223 + 685 \times (1 - .35)}{13{,}193} = 0.1264 = 12.64\%$$

h. Long-term debt ratio (use end-of-year balance sheet figures)

$$\text{Long-term debt ratio} = \frac{7{,}018}{7{,}018 + 9{,}724} = 0.42$$

i. Total debt ratio (use end-of-year balance sheet figures)

$$\text{Total debt ratio} = \frac{4{,}794 + 7{,}018 + 6{,}178}{27{,}714} = 0.65$$

j. Time's interest earned

$$\text{Times interest earned } = \frac{2{,}566}{685} = 3.75$$

k. Cash coverage ratio

$$\text{Cash coverage ratio } = \frac{2{,}566 + 2{,}518}{685} = 7.42$$

l. Current ratio (use end-of-year balance sheet figures)

$$\text{Current ratio } = \frac{3{,}525}{4{,}794} = 0.74$$

m. Quick ratio (use end-of-year balance sheet figures)

$$\text{Quick ratio } = \frac{89 + 2{,}382}{4{,}794} = 0.52$$

6. Financial Ratios. Consider this simplified balance sheet for Geomorph Trading, (CH4.Q8)

Current assets	\$100	Current liabilities	\$60
Long-term assets	500	Long-term debt	280
		Other liabilities	70
		Equity	190
Total	\$600	Total	\$600

a. What is the company's debt-equity ratio?

Debt / equity = 410/190 = 2.58

b. What is the ratio of total long-term debt to total long-term capital?

$$\text{Total long} - \text{ term debt / total long} - \text{ term capital } = 280/(280 + 190) = 0.60$$

c. What is its net working capital?

Net working capital = 100 – 60 = 40

d. What is its current ratio?

$$\text{Current ratio} \;=\; 100/60 \;=\; 1.67$$