

Question 1:

An incomplete 2013 balance sheet for O’Keefe Industries is expressed below together with the following key financial data:

ANSWER

O’Keefe Industries Balance Sheet December 31, 2013

ASSETS		LIABILITIES AND STOCKHOLDERS' EQUITY	
Cash	\$30,000	Accounts payable	\$120,000
Marketable securities	25,000	Notes payable	160,000
Account receivable	200,000	Accruals	20,000
Inventories	225,000	Total current liabilities	300,000
Total current assets	\$480,000	Long-term debt	600,000
Net fixed assets	1,020,000	Stockholders' equity	\$600,000
Total assets	1,500,000	Total liabilities and stockholders' equity	1,500,000

- (1) Sales totaled \$1,800,000.
- (2) The gross profit margin was 25%.
- (3) Inventory turnover was 6.0.
- (4) There are 360 days in the year.
- (5) The average collection period was 40 days.
- (6) The current ratio was 1.60.
- (7) The total asset turnover ratio was 1.20.
- (8) The debt ratio was 60%.
- (9) O’Keefe had common stocks outstanding at 150,000 shares with market price of \$5.15.
- (10) EBIT of O’Keefe was \$200,000, which resulted in net income of \$90,000.

1.1 Complete the 2013 balance sheet for O’Keefe Industries by using provided information.

Note: Please fill your answer into the balance sheet above.

1.2 Assume the company's corporate tax was at 40% and cost of capital was 10%, calculate the following measures of shareholders' wealth and provide the meaning.

A) Market Value Added (MVA) and Market-to-Book ratio

ANSWER

$$\begin{aligned}\text{Market Value Added (MVA)} &= \text{Market Value} - \text{Book Value} \\ &= (150,000) \times (5.15) - 600,000 \\ &= \underline{\$172,500}\end{aligned}$$

MVA shows that market value of the company is greater than its book value (as measured by total equity) at \$172,500.

$$\begin{aligned}\text{Market-to-Book Ratio} &= \frac{150,000 \times 5.15}{600,000} \\ &= \underline{1.2875 \text{ times}}\end{aligned}$$

Market-to-Book Ratio shows that market value of the company is higher than its book value (as measured by total equity) around 1.2875 times.

B) Economic Value Added (EVA)

ANSWER

$$\begin{aligned}\text{Economic Value Added (EVA)} &= \text{EBIT} \times (1-t) - [(\text{Capital}) \times (\text{Cost of capital})] \\ &= 200,000 \times (1-40\%) - \\ &\quad [(600,000+600,000) \times 10\%] \\ &= 120,000 - 120,000 \\ &= \underline{0}\end{aligned}$$

The calculated Economic Value Added (EVA) shows that the company has no economic profit since its profit earned is equal to cost of all financing from total capital. That is, there is no excess return of the company over its cost of capital.

Question 2:

Win Hom Railroad, a public transportation company, would like to form a complete Balance Sheet and Income Statement for the year end 2013. However, some of the entries were missing. The only available data were financial ratios which could help the finance department to work out.

2013 INCOME STATEMENT (Unit: Million US\$)

Net sales	180.00
Cost of goods sold	110.00
Selling, general, and administrative expenses	10
Depreciation	20
Earnings before interest and taxes (EBIT)	40.00
Interest expense	5.00
Income before tax	35.00
Tax	10.50
Net income	24.50

2013 BALANCE SHEET (Unit: Million US\$)

	2013
Assets	
Cash and marketable securities	11.00
Receivables	44.00
Inventories	22.00
Total current assets	77.00
Net property, plant, and equipment	38.00
Total assets	115.00

Liabilities and shareholders' equity	
Accounts payable	25
Notes payable	30
Total current liabilities	55.00
Long-term debt	23.00
Shareholders' equity	37.00
Total liabilities and shareholders' equity	115

2.1 Complete the 2013 Balance Sheet and Income Statement for Win Hom Railroad by using the financial ratios provided. Assume a 360-day year. Fill your answer into the Balance Sheet and the Income Statement on previous page.

Ratios	2013 Win Hom Railroad
Long-term debt ratio	0.20
Times interest earned	8.00
Current ratio	1.40
Quick ratio	1.00
Cash ratio	0.20
Return on assets	21.30%
Return on equity	66.22%
Inventory turnover	5.00
Average collection period	88.00 days

ANSWER

If we use company as a benchmark, the benchmark company should be within the same industry. Otherwise, we should compare the company's operating performance by benchmarking with the previous year(s).

2.2 Financial Manager of Win Hom Railroad wanted to measure overall performance of the company. She wondered whether the benchmark should be BangChak Hospital, which is a company in health service industry, or its own performance of the previous year. How would you suggest? Why?

Ratios	2013 Win Hom Railroad	2013 BangChak Hospital	2012 Win Hom Railroad
Long-term debt ratio	0.20	0.40	0.30
Times interest earned	8.00	5.00	6.50
Current ratio	1.40	2.00	1.20
Quick ratio	1.00	0.90	0.85
Cash ratio	0.20	0.75	0.25
Return on assets	21.30%	25.00%	20.00%
Return on equity	66.22%	45.00%	50.00%
Inventory turnover	5.00	10.00	3.00
Average collection period	88.00 days	28.00 days	75.00 days

2.3 Summarize the company's overall performance compared with an appropriate benchmark you suggested from (2.2).

ANSWER

- Liquidity: Win Hom had 2013 performance better than 2012. Both current and quick ratios were improved. Especially, current ratio was greater than 1 and a bit higher than 2012's.
- Activity: In 2013, Win Hom could turn out its inventory into sale revenue more often – on average 5 times – than in 2012. However, collection period from its receivables was greater. This implied that the company took longer time to collect cash from customers – on average 13 days more.
- Leverage: It is quite common for Railroad Company that more would have relatively low debt ratio. During 2012-2013, Win Hom had debt around 20% of the total assets. With regard the ability to make interest payment on its debt obligation, the company much improved on this criterion. Its time interest earned ratio was increased to 8 times from 6 times in 2012. This implied that the company had EBIT 8 times higher than its interest payment obligation.
- Profitability: Profitability of Win Hom was improved in 2013. Both ROA and ROE was increased to 21.30% (from 20%) and 66.22% (from 50%), respectively.
- Overall, the performance of Win Hom was improved significantly, especially ROE.

Question 3:

The key financial statements of Total Access Communication PLC. (DTAC) and Advanced Info Service PLC. (AIS) for the year ended December 31, 2013, are as follows.

BALANCE SHEET	DTAC	AIS
(Million Baht)	2013	2013
Cash & Equivalent	5,472	16,831
Accounts receivable	10,351	10,264
Inventory	1,683	2,865
PP&E-net	15,120	35,922
Other fixed assets	72,428	45,490
Total assets	105,054	111,372
Accounts payable	28,190	11,718
ST debts & current portion	8,296	5,303
Long-term debt	23,164	15,355
Other long-term liabilities	4,029	5,287
Total liabilities	72,334	65,480
Paid-up capital	4,736	2,973
Share premium	23,543	22,372
Retained earnings	2,782	20,403
Shareholder's equity	32,720	45,892
Total Liab.&Shareholders' equity	105,054	111,372

INCOME STATEMENT	DTAC	AIS
(Million Baht)	2013	2013
Revenue	94,369	142,783
Cost of sales and services	(65,119)	(81,141)
Gross profit	29,250	61,642
Selling, general, and administration expenses	(13,630)	(14,847)
EBIT	15,620	46,795
Interest expense	(1,270)	(1,002)
Other income/exp.	335	871
EBT	14,685	46,664
Corporate tax	(2,888)	(10,008)
After-tax net profit (loss)	11,797	36,656

3.1 In 2013, DTAC had 2,400 million shares of common stocks outstanding with market price at 105.50 Baht. Assume DTAC's effective corporate tax was at 19.67% and cost of capital was 10%, calculate the following measures of shareholders' wealth of DTAC and provide the meaning.

A) Market Value Added (MVA)

ANSWER

$$\begin{aligned} \text{MVA} &= \text{MV} - \text{BV} \\ &= (2,400 \times 105.5) - 32,720 \\ &= \mathbf{220,480.00 \text{ million}} \end{aligned}$$

B) Economic Value Added (EVA)

ANSWER

$$\begin{aligned} \text{EVA} &= \text{EBIT} \times (1-t) - \text{Cost of all financing} \\ &= 15620 \times (1-19.67\%) - 10\% \times (23,164 + 32,720) \\ &= \mathbf{6,959.146} \end{aligned}$$

3.2 Use the preceding financial statements of DTAC to compute key financial ratios by completing the following table. **(10 Points)**

ANSWER

Ratio	AIS	DTAC
Current ratio	1.7602	0.4798
Quick ratio	1.5919	0.4337
Inventory turnover ^a	28.3215	38.6922
Average collection period ^a	25.8787	39.4871
Debt ratio (%)	58.7940	68.8541
Time interest earned ratio	46.7016	12.2992
Gross profit margin (%)	43.1718	30.9953
Net profit margin (%)	25.6725	12.5009
Return on total assets (%)	32.9131	11.2295
Return on equity (%)	79.8745	36.0544

^a Based on a 360-day year.

3.3 Summarize overall financial condition of DTAC by comparing with AIS under each criterion. If you want to invest in either DTAC or AIS, which company should you choose?

ANSWER