Chapter 12 (week 12 lecture)

Tutorial question (P12-4A, P12-5A)

P12–4A The following income statement and balance sheets for Virtual Gaming Systems are provided.

VIRTUAL GAMING SYSTEMS **Income Statement** **For the year ended December 31, 2024**		
Net sales		$3,086,000
Cost of goods sold		1,960,000
Gross profit		1,126,000
Expenses:		
Operating expenses	$868,000	
Depreciation expense	32,000	
Loss on sale of land	9,000	
Interest expense	20,000	
Income tax expense	58,000	
Total expenses		987,000
Net income		$ 139,000

VIRTUAL GAMING SYSTEMS **Balance Sheets** **December 31**		
	2024	2023
Assets		
Current assets:		
Cash	$196,000	$154,000
Accounts receivable	91,000	70,000
Inventory	115,000	145,000
Prepaid rent	13,000	7,200
Long-term assets:		
Investment in bonds	115,000	0
Land	220,000	250,000
Equipment	280,000	220,000
Less: Accumulated depreciation	(84,000)	(52,000)
Total assets	$946,000	$794,200
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 76,000	$ 91,000
Interest payable	8,000	4,000
Income tax payable	20,000	15,000
Long-term liabilities:		
Notes payable	295,000	235,000
Stockholders' equity:		
Common stock	310,000	310,000
Retained earnings	237,000	139,200
Total liabilities and stockholders' equity	$946,000	$794,200

Required:

Assuming that all sales were on account, calculate the following risk ratios for 2024.

1. Receivables turnover ratio.
2. Average collection period.
3. Inventory turnover ratio.
4. Average days in inventory.
5. Current ratio.
6. Acid-test ratio.
7. Debt to equity ratio.
8. Times interest earned ratio.

P12–5A Data for Virtual Gaming Systems are provided in P12–4A. Earnings per share for the year ended December 31, 2024, are $1.40. The closing stock price on December 31, 2024, is $28.30.

Required:

Calculate the following profitability ratios for 2024.

1. Gross profit ratio.
2. Return on assets.
3. Profit margin.
4. Asset turnover.
5. Return on equity.
6. Price-earnings ratio.

Take-home question (E12-5, E12-6, E12-7, E12-8, RWP12-6)

E12–5 The 2024 income statement of Adrian Express reports sales of $19,310,000, cost of goods sold of $12,250,000, and net income of $1,700,000. Balance sheet information is provided in the following table.

ADRIAN EXPRESS Balance Sheets December 31, 2024 and 2023		
	2024	2023
Assets		
Current assets:		
Cash	$ 700,000	$ 860,000
Accounts receivable	1,600,000	1,100,000
Inventory	2,000,000	1,500,000
Long-term assets	4,900,000	4,340,000
Total assets	$9,200,000	$7,800,000
Liabilities and Stockholders' Equity		
Current liabilities	$1,920,000	$1,760,000
Long-term liabilities	2,400,000	2,500,000
Common stock	1,900,000	1,900,000
Retained earnings	2,980,000	1,640,000
Total liabilities and stockholders' equity	$9,200,000	$7,800,000

Industry averages for the following four risk ratios are as follows:

Average collection period	25 days
Average days in inventory	60 days
Current ratio	2 to 1
Debt to equity ratio	50%

Required:

1. Calculate the four risk ratios listed above for Adrian Express in 2024.
2. Do you think the company is more risky or less risky than the industry average? Explain your answer.

E12–6 Refer to the information for Adrian Express in E12–5. Industry averages for the following profitability ratios are as follows:

Gross profit ratio	45%
Return on assets	25%
Profit margin	15%
Asset turnover	2.5 times
Return on equity	35%

Required:

1. Calculate the five profitability ratios listed above for Adrian Express.
2. Do you think the company is more profitable or less profitable than the industry average? Explain your answer.

E12–7 The balance sheets for Plasma Screens Corporation and additional information are provided below.

PLASMA SCREENS CORPORATION Balance Sheets December 31, 2024 and 2023		
	2024	2023
Assets		
Current assets:		
Cash	$ 242,000	$ 130,000
Accounts receivable	98,000	102,000
Inventory	105,000	90,000
Investments	5,000	3,000
Long-term assets:		
Land	580,000	580,000
Equipment	890,000	770,000
Less: Accumulated depreciation	(528,000)	(368,000)
Total assets	$1,392,000	$1,307,000
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 109,000	$ 95,000
Interest payable	7,000	13,000
Income tax payable	9,000	6,000
Long-term liabilities:		
Notes payable	110,000	220,000
Stockholders' equity:		
Common stock	800,000	800,000
Retained earnings	357,000	173,000
Total liabilities and stockholders' equity	$1,392,000	$1,307,000

Additional Information for 2024:

1. Net income is $184,000.
2. Sales on account are $1,890,000.
3. Cost of goods sold is $1,394,250.

Required:

1. Calculate the following risk ratios for 2024:
   a. Receivables turnover ratio.
   b. Inventory turnover ratio.
   c. Current ratio.
   d. Acid-test ratio.
   e. Debt to equity ratio.
2. When we compare two companies, can one have a higher current ratio while the other has a higher acid-test ratio? Explain your answer.

E12–8 Refer to the information provided for Plasma Screens Corporation in E12–7.

Required:

1. Calculate the following profitability ratios for 2024:
   a. Gross profit ratio.
   b. Return on assets.
   c. Profit margin.
   d. Asset turnover.
   e. Return on equity.
2. When we compare two companies, can one have a higher return on assets while the other has a higher return on equity? Explain your answer.

Ethics

RWP12–6 After years of steady growth in net income, Performance Drug Company reported a preliminary net loss in 2024. The CEO, Joe Mammoth, notices the following estimates are included in reported performance:

1. Warranty expense and liability for estimated future warranty costs associated with sales in the current year.
2. Loss due to ending inventory's net realizable value (estimated selling price) falling below its cost. This type of inventory write down occurs most years.
3. Depreciation of major equipment purchased this year, which is estimated to have a 10-year service life.

Joe is worried that the company's poor performance will have a negative impact on the company's risk and profitability ratios. This will cause the stock price to decline and hurt the company's ability to obtain needed loans in the following year. Before releasing the financial statements to the public, Joe asks his CFO to reconsider these esimates. He argues that (1)warranty work won't happen until next year, so that estimate can be eliminated, (2) there's always a chance we'll find the right customer and sell inventory above cost, so the estimated loss on inventory write-down can be eliminated, and (3) we may use the equipment for 20 years (even though equipment of this type has little chance of being used for more than 10 years). Joe explains that all of his suggestions make good business sense and reflect his optimism about the company's future. Joe further notes that executive bonuses (including his and the CFO's) are tied to net income and if we don't show a profit this year, there will be no bonuses.

Required:

1. Understand the reporting effect: How would excluding the warranty adjustment affect the debt to equity ratio? How would excluding the inventory adjustment affect the gross profit ratio? How would extending the depreciable life to 20 years affect the profit margin?
2. Specify the options: If the adjustments are kept, what will they indicate about the company's overall risk and profitability?
3. Identify the ipact: Could these adjustments affect stockholders, lenders, and management?
4. Make a decision: Should the CFO follow Joe's suggestions of not including these adjustments?