

### **Required**

- a. Keeping in mind the Sassy Jeans strategy for success, suggest one performance measure for each dimension of a balanced scorecard.
- b. Identify the links between the measures (strategy map) you identified in part a.

**PROBLEM 12-13. You Get What You Measure and a Balanced Scorecard [LO 7]** Kasper Industries produces custom molds that are used by producers of molded products (e.g., ski boots and snowboards). Many of its customers use just-in-time (JIT) manufacturing, and on-time delivery of the molds is critical because production is halted if the molds are not available when needed. In the past, managers (including Maria Patterson, the vice president of operations) at Kasper have been rewarded based on financial performance. This has led to actions that are not consistent with maximizing shareholder value. Near the end of each quarter, Maria evaluates expected profit in relation to the company's profit goal. If expected profit is below the goal, she rushes into production customer orders that have a high profit margin, even if the orders are not due for two or three weeks. Thus, deliveries of high-profit-margin jobs are often early and deliveries of low-profit-margin jobs (displaced in Kasper's production schedule) are often late. The company has not performed well on a dimension of performance that is critical for long-run success.

### **Required**

- a. A consultant to Kasper Industries has suggested that the company use a balanced scorecard. Suggest a customer measure and an internal process measure that will help the company track its performance with respect to on-time delivery and other improvements that meet the needs of customers.
- b. Suppose that Maria Patterson continues to manage production to meet short-run profit goals. Explain how her actions will be detected by the customer and internal process measures you suggested in part a.

**PROBLEM 12-14. (Appendix) Transfer Pricing [LO A1]** The Leviathan Steel Company has a coal-mining subsidiary in West Virginia. A substantial amount of the coal produced by the subsidiary is used by Leviathan's steel foundries located in Pennsylvania.

### **Required**

- a. Recommend and defend a transfer price (market price, variable cost, or full cost plus profit) for the coal shipped by the mining subsidiary to the foundries.
- b. Indicate how the price you recommended in part a compares with the opportunity cost related to using the coal internally.

**PROBLEM 12-15. (Appendix) Decentralization and Transfer Pricing [LO A1]** The City of Medina Park operates a plumbing and electrical maintenance department, responsible for maintaining all water and electric service functions in buildings owned by the city. The city administration is concerned about the rising costs of the maintenance department, which is currently organized as a cost center. Charlotte Daugherty, the manager of the maintenance department, says that many of the department's service calls are strictly nuisance calls. She cites examples of numerous calls for defective electrical outlets, which turn out to be unplugged equipment, burned-out lightbulbs (which can easily be changed by the users), and drains clogged by coffee grounds. In Charlotte's opinion, these nuisance calls would be avoided if the departments using her department's services were "billed." Essentially, Charlotte suggests that there be a transfer price related to using her department's services and that the price should approximate the cost of these services in the market (\$40–\$55 per hour of service time). This would turn her operation into a profit center, and, she believes, her department would operate more efficiently because demand for services would decline and she would need fewer employees.

### **Required**

Evaluate Charlotte's proposal. Do you support use of a transfer price for maintenance services? If so, should the price approximate the market price of service or should it be based on cost?

**Required**

a. Compute the following amounts and ratios at the beginning of the year:

1. Current ratio.
2. Acid-test ratio (quick ratio).

b. Indicate the effect of each transaction listed above on the current ratio and the acid-test ratio (quick ratio). Give the effect in terms of increase, decrease, or none. Part a is done as an example below to show the format used.

	Effect on	
	Current Ratio	Acid-Test Ratio (Quick Ratio)
increase	increase	increase

Paid a cash dividend previously declared

**PROBLEM 14-13. Common-Size Financial Statements [LO 1, 2]** The financial statements for the Bao Corporation are given below.

**Bao Corporation  
Comparative Balance Sheets  
December 31, 2012 and 2011**

	2012	2011
<b>Assets</b>		
Current assets:		
Cash	\$ 1,900	\$ 1,300
Accounts receivable net	9,100	7,300
Inventory	11,300	9,100
Prepaid expenses	560	250
Total current assets	<u>22,860</u>	<u>17,950</u>
Property and equipment:		
Land	86,000	86,000
Buildings and equipment, net	48,600	52,000
Total property and equipment	<u>134,600</u>	<u>138,000</u>
Total assets	<u>\$157,460</u>	<u>\$155,950</u>
<b>Liabilities and Stockholder's Equity</b>		
Current liabilities:		
Accounts payable	\$ 17,600	\$ 21,000
Accrued expenses	1,620	4,430
Notes payable, short term	540	220
Total current liabilities	<u>19,760</u>	<u>25,650</u>
Long-term liabilities:		
Bonds payable	5,300	5,300
Notes payable	34,400	35,000
Total liabilities	<u>59,460</u>	<u>65,950</u>
Stockholder's equity:		
Common stock	11,000	11,000
Additional paid-in capital	19,000	19,000
Total paid-in capital	<u>30,000</u>	<u>30,000</u>
Retained earnings	68,000	60,000
Total stockholder's equity	<u>98,000</u>	<u>90,000</u>
Total liabilities and stockholder's equity	<u>\$157,460</u>	<u>\$155,950</u>

**Bao Corporation**  
**Comparative Income Statement**  
**For the Year Ended December 31, 2012 and 2011**

	2012	2011
Sales	\$130,000	\$111,000
Cost of goods sold	<u>67,000</u>	<u>61,000</u>
Gross margin	<u>63,000</u>	<u>50,000</u>
Operating expenses:		
Selling expenses	24,500	20,000
Administrative expenses	<u>17,500</u>	<u>14,600</u>
Total operating expenses	<u>42,000</u>	<u>34,600</u>
Income from operations	21,000	15,400
Interest expense	<u>5,600</u>	<u>4,700</u>
Income before taxes	15,400	10,700
Less income taxes	<u>6,160</u>	<u>4,280</u>
Net income	<u>\$ 9,240</u>	<u>\$ 6,420</u>

**Required**

- Present the balance sheet with each account balance as a percent of total assets.
- Present the income statement with each balance as a percent of sales.
- Comment on the results of any significant findings.
- What types of issues does the company seem to be facing?
- What suggestions do you have for the Bao Corporation?

**PROBLEM 14-14. Horizontal Analysis [LO 1, 2]** Refer to the financial data for Bao Corporation in Problem 14-13. Using these financial statements, complete the following steps.

**Required**

- Prepare a horizontal analysis for the balance sheet.
- Prepare a horizontal analysis for the income statement.
- Comment on the results of any significant findings.
- What types of issues does the company seem to be facing?
- What suggestions do you have for the Bao Corporation?

**PROBLEM 14-15. Comprehensive Ratio Analysis [LO 5, 6, 7]** Refer to the financial data for the Bao Corporation in Problem 14-13. You have just been hired as a loan officer at the Sussex Bank. Your supervisor has given you a file containing a request from Bao Corporation for a \$30,000 five-year loan. Use the financial statements for the Bao Corporation to answer the questions that follow.

Lui Chun, who just a year ago was appointed president of Bao Corporation, informs you that although the company has had some problems in the past, it is turning things around, as evidenced by the 17 percent increase in sales and the improved earnings results between last year and this year. Ms. Chun feels that, with her leadership and the improved technology (which will come from the equipment that the \$30,000 will allow the company to purchase), profits will be even stronger in the future.

Wanting to succeed in your first assignment, you decide to gather all the necessary information for a complete analysis. You determine that the following ratios are typical for the industry in which Bao Corporation operates:

Current ratio	2.6 to 1
Acid-test (quick) ratio	1.2 to 1
Accounts receivable turnover	8.5 times
Inventory turnover	6.2 times
Return on assets	12.1%
Debt-to-equity ratio	0.68 to 1
Times interest earned	6.8

**Required**

- a. Compute each of the above ratios for Bao Corporation.
- b. Summarize the results of these ratios.
- c. Based on this analysis, would you recommend that the loan be approved?

**PROBLEM 14-16. Interpretation of Financial Ratios [LO 6, 7]** Jordan Li is interested in purchasing the stock of Mendella, a company that sells concrete mixtures to the construction industry. Before purchasing the stock, Jordan would like to learn as much as possible about the company. However, all she has to go on is the current year's (Year 3) annual report, which contains no comparative data other than the summary of the ratios given below.

	Year 3	Year 2	Year 1
Current ratio	2.6:1	2.4:1	2.2:1
Acid test (quick ratio)	0.9:1	1.0:1	1.1:1
Accounts receivable turnover	9.2 times	10.3 times	11.5 times
Inventory turnover	6.2 times	7.8 times	8.1 times
Return on total assets	14.5%	13.1%	11.3%
Return on common stockholder's equity	17.2%	15.1%	12.9%
Price-earnings ratio	14.5	17.2	17.8
Earnings per share	\$1.52	\$1.51	\$1.54

Jordan would like answers to a number of questions about the trend of events for Mendella over the past three years. She has the following questions:

- 1. Is it becoming easier for the company to pay its bills as they come due?
- 2. Are customers paying their accounts as well as they were in Year 1?
- 3. Is the level of inventory increasing, decreasing, or remaining constant?
- 4. Is the market price of the company's stock going up or down?
- 5. Is the company employing financial leverage to the advantage of the common stockholders?

**Required**

Answer each of Jordan's questions using the data given above. In each case, explain how you arrived at your answer.

**PROBLEM 14-17. Effects of Transactions on Financial Ratios [LO 5, 6, 7]** Listed in the right-hand column below are certain financial ratios. To the left of each ratio is a business transaction or event relating to the operating activities of Candice, Inc., an exporter of ceramic tile.

Business Transaction or Event	Ratio
1. The company declared a cash dividend.	Current ratio
2. The company sold inventory on account.	Acid-test ratio (quick ratio)
3. The company's net income decreased by 5 percent between last year and this year. Long-term debt remained unchanged.	Times interest earned
4. A previously declared cash dividend was paid.	Current ratio
5. Obsolete inventory totaling \$60,000 was written off at a loss.	Inventory turnover ratio
6. The company sold inventory for cash at a profit.	Debt-to-equity ratio
7. The company issued common stock for cash.	Earnings per share
8. The company paid \$7,000 on accounts payable.	Current ratio
9. The company purchased inventory on credit terms.	Acid test (quick ratio)
10. The market price of the company's common stock increased from \$24.50 to \$37.20. Earnings per share remained unchanged.	Price-earnings ratio

**Required**

Indicate the impact of the transaction on the corresponding ratio (increase, decrease, or no effect).