

Sample problems—Ratio analysis

1. The Charleston Company is a relatively small, privately owned firm. Last year the company had after-tax income of \$15,000, and 10,000 shares were outstanding. The owners were trying to determine the market value for the stock, prior to taking the company public. A similar firm which is publicly traded had a P/E ratio of 5.0. Using only the information given, estimate the market of one share of Charleston's stock.
2. Manufacturer's Inc. estimates that its interest charges for this year will be \$700 and that its net income will be \$3,000. Assuming its average tax rate is 30%, what is the company's estimated times interest earned ratio?
3. Given the following information, compute the value of cost of goods sold for Peterson Brewing

Current liabilities	\$340,000
Quick ratio	1.8x
Inventory turnover	6x
Current ratio	3.3x

4. ABC Co. has a Days Sales Outstanding ratio of 60 days. Total credit sales for the year were \$2,400,000. What is the balance in accounts receivable?
5. A firm has current assets of \$50,000 and total assets of \$250,000. The firm's sales are \$600,000. What is the firm's fixed asset turnover?
6. A firm has total assets of \$1,000,000. It has \$400,000 in long-term debt. The stockholders' equity is \$450,000. What is the debt ratio?
7. A firm has operating profit (EBIT) of \$120,000 after deducting lease payments of \$20,000. Interest expense is \$40,000. What is the firm's fixed charge coverage?
8. The Bubba Corp. had earnings before taxes of \$200,000 and sales of \$2,000,000. If it is in the 50% tax bracket, what is its net profit margin?
9. If the equity multiplier is 2.50 then the debt ratio is ____.
10. A firm has sales of \$50,000 and total assets of \$20,000, and a net profit margin of 4%. Its equity multiplier is 1.25. What is the firm's return on equity?
11. If a firm has interest expenses of \$10,000 per year, sales of \$700,000, a tax rate of 40%, and a net profit margin of 7%, what is the firm's times interest earned ratio?
12. A firm's price to earnings ratio is 8, and its market to book ratio is 2. If its earnings per share are \$4.00, what is the book value per share?
13. What is the return on stockholders' equity for a firm with a net profit margin of 5.2 percent, sales of \$620,000, and an equity multiplier of 1.8, and total assets of \$380,000?
14. Suppose the return on equity is 24%, and the equity multiplier is 1.50. What is the return on assets?
15. Given the following information, calculate the inventory for J&C Videos:
Quick ratio = 1.2; Current assets = \$12,000; Current ratio = 2.5
16. If the debt-to-equity ratio of a firm is 0.50; what is its equity multiplier?

17. Altman Corporation has interest expenses of \$120,000 annually. Altman's annual sales are \$4 million, its tax rate is 25%, and its net profit margin on sales is 10 percent. What is Altman's TIE?
18. A fire has destroyed many of the financial records at Anderson Associates. You are assigned to piece together information to prepare a financial report. You have found that the firm's return on equity is 12 percent and its debt ratio is 0.40. What is its return on assets?
19. Using the following data, compute the value of Cost of goods sold for Peterson Brewing: Current liabilities = \$340,000; Quick ratio = 1.8x; Inventory turnover = 4.0x; Current ratio = 3.3.
20. Martin's Method Acting School has net income of \$180,000, a profit margin of 10%, and an accounts receivable balance of \$150,000. What is the firm's days' sales in receivables?
21. A firm has current liabilities of \$250, a current ratio of 1.2, and a quick ratio of 0.80. Calculate the level of inventory for this firm.
22. Back Alley Boys, Inc. had sales of \$250,000, cost of goods sold of \$80,000, depreciation expense of \$27,000, and additions to retained earnings of \$33,360. The firm paid out \$30,000 in dividends. Assume a 34% income tax rate, what is the times interest earned ratio?
23. The Jordan Company has net income of \$75,500. There are currently 14.20 days sales in receivables. Total assets are \$560,000, total receivables are \$86,600 and the debt-equity ratio is 0.65. What is Jordan's ROE?
24. Tommy Illfinger Inc.'s net income for the most recent year was \$6,250. The tax rate was 34 percent. The firm paid \$2,235 in total interest expense and deducted \$1,450 in depreciation expense. What was Tommy Illfinger's cash coverage ratio for the year?
25. A firm has a total book value of equity of \$300,000, a market to book ratio of 3, and a book value per share of \$8.00. What is the total market value of the firm's equity?
26. Using the following data, compute the value of cost of goods sold for Peterson Brewing:
Current liabilities=\$340,000 quick ratio=1.8 inventory turnover=4.0 current ratio=3.3
27. A firm has current liabilities of \$250, a current ratio of 1.2, and a quick ratio of 0.80. Compute the level of inventory for this firm
28. A firm has sales of \$500, total assets of \$300, and a debt/equity ratio of 2.00. If its return on equity is 15 percent, what is its net income?
29. Moss Motors has \$272 million in assets, and its tax rate is 40%. The company's basic earning power (BEP) ratio is 41%, and its return on assets (ROA) is 11%. What is Moss' times-interest-earned (TIE) ratio?
30. U KNO, Inc. uses only debt and common equity funds to finance its assets. This past year the firm's ROA was 13%. The firm financed 42% of its total assets using debt. What was the firm's return on common equity?