

The Balance Sheet

4. Consider the following potential events that might have taken place at Global Conglomerate on December 30, 2012. For each one, indicate which line items in Global's balance sheet would be affected and by how much. Also indicate the change to Global's book value of equity. (In all cases, ignore any tax consequences for simplicity.)
 - a. Global used \$20 million of its available cash to repay \$20 million of its long-term debt.
 - b. A warehouse fire destroyed \$5 million worth of uninsured inventory.
 - c. Global used \$5 million in cash and \$5 million in new long-term debt to purchase a \$10 million building.
 - d. A large customer owing \$3 million for products it already received declared bankruptcy, leaving no possibility that Global would ever receive payment.
 - e. Global's engineers discover a new manufacturing process that will cut the cost of its flagship product by over 50%.
 - f. A key competitor announces a radical new pricing policy that will drastically undercut Global's prices.
5. What was the change in Global Conglomerate's book value of equity from 2011 to 2012 according to Table 2.1? Does this imply that the market price of Global's shares increased in 2012? Explain.
6. Use EDGAR to find Qualcomm's 10K filing for 2011. From the balance sheet, answer the following questions:
 - a. How much did Qualcomm have in cash, cash equivalents, and marketable securities (short and long-term)?
 - b. What were Qualcomm's total accounts receivable?
 - c. What were Qualcomm's total assets?
 - d. What were Qualcomm's total liabilities? How much of this was long-term debt?
 - e. What was the book value of Qualcomm's equity?
7. Find online the annual 10-K report for Peet's Coffee and Tea (PEET) for fiscal year 2011 (filed in January 2012). Answer the following questions from their balance sheet:
 - a. How much cash did Peet's have at the end of the fiscal year?
 - b. What were Peet's' total assets?
 - c. What were Peet's' total liabilities? How much debt did Peet's have?
 - d. What was the book value of Peet's equity?
8. In early 2009, General Electric (GE) had a book value of equity of \$105 billion, 10.5 billion shares outstanding, and a market price of \$10.80 per share. GE also had cash of \$48 billion, and total debt of \$524 billion. Three years later, in early 2012, GE had a book value of equity of \$116 billion, 10.6 billion shares outstanding with a market price of \$17 per share, cash of \$84 billion, and total debt of \$410 billion. Over this period, what was the change in GE's
 - a. market capitalization?
 - b. market-to-book ratio?
 - c. enterprise value?
9. In mid-2012, Abercrombie & Fitch (ANF) had a book equity of \$1693 million, a price per share of \$35.48, and 82.55 million shares outstanding. At the same time, The Gap (GPS) had a book equity of \$3017 million, a share price of \$27.90, and 489.22 million shares outstanding.
 - a. What is the market-to-book ratio of each of these clothing retailers?
 - b. What conclusions can you draw by comparing the two ratios?
10. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp.
 - a. What is Mydeco's market capitalization at the end of each year?
 - b. What is Mydeco's market-to-book ratio at the end of each year?
 - c. What is Mydeco's enterprise value at the end of each year?

TABLE 2.5

**2009–2013 Financial Statement Data and Stock Price Data
for Mydeco Corp.**

Mydeco Corp. 2009–2013

(All data as of fiscal year end; in \$ million)

Income Statement	2009	2010	2011	2012	2013
Revenue	404.3	363.8	424.6	510.7	604.1
Cost of Goods Sold	(188.3)	(173.8)	(206.2)	(246.8)	(293.4)
Gross Profit	216.0	190.0	218.4	263.9	310.7
Sales and Marketing	(66.7)	(66.4)	(82.8)	(102.1)	(120.8)
Administration	(60.6)	(59.1)	(59.4)	(66.4)	(78.5)
Depreciation & Amortization	(27.3)	(27.0)	(34.3)	(38.4)	(38.6)
EBIT	61.4	37.5	41.9	57.0	72.8
Interest Income (Expense)	(33.7)	(32.9)	(32.2)	(37.4)	(39.4)
Pretax Income	27.7	4.6	9.7	19.6	33.4
Income Tax	(9.7)	(1.6)	(3.4)	(6.9)	(11.7)
Net Income	18.0	3.0	6.3	12.7	21.7
<i>Shares outstanding (millions)</i>	55.0	55.0	55.0	55.0	55.0
<i>Earnings per share</i>	\$0.33	\$0.05	\$0.11	\$0.23	\$0.39
Balance Sheet	2009	2010	2011	2012	2013
<i>Assets</i>					
Cash	48.8	68.9	86.3	77.5	85.0
Accounts Receivable	88.6	69.8	69.8	76.9	86.1
Inventory	33.7	30.9	28.4	31.7	35.3
Total Current Assets	171.1	169.6	184.5	186.1	206.4
Net Property, Plant & Equip.	245.3	243.3	309	345.6	347.0
Goodwill & Intangibles	361.7	361.7	361.7	361.7	361.7
Total Assets	778.1	774.6	855.2	893.4	915.1
<i>Liabilities & Stockholders' Equity</i>					
Accounts Payable	18.7	17.9	22.0	26.8	31.7
Accrued Compensation	6.7	6.4	7.0	8.1	9.7
Total Current Liabilities	25.4	24.3	29.0	34.9	41.4
Long-term Debt	500.0	500.0	575.0	600.0	600.0
Total Liabilities	525.4	524.3	604.0	634.9	641.4
Stockholders' Equity	252.7	250.3	251.2	258.5	273.7
Total Liabilities & Stockholders' Equity	778.1	774.6	855.2	893.4	915.1
Statement of Cash Flows	2009	2010	2011	2012	2013
Net Income	18.0	3.0	6.3	12.7	21.7
Depreciation & Amortization	27.3	27.0	34.3	38.4	38.6
Chg. in Accounts Receivable	3.9	18.8	(0.0)	(7.1)	(9.2)
Chg. in Inventory	(2.9)	2.8	2.5	(3.3)	(3.6)
Chg. in Payables & Accrued Comp.	2.2	(1.1)	4.7	5.9	6.5
Cash from Operations	48.5	50.5	47.8	46.6	54.0
Capital Expenditures	(25.0)	(25.0)	(100.0)	(75.0)	(40.0)
Cash from Investing Activities	(25.0)	(25.0)	(100.0)	(75.0)	(40.0)
Dividends Paid	(5.4)	(5.4)	(5.4)	(5.4)	(6.5)
Sale (or purchase) of stock	—	—	—	—	—
Debt Issuance (Pay Down)	—	—	75.0	25.0	—
Cash from Financing Activities	(5.4)	(5.4)	69.6	19.6	(6.5)
Change in Cash	18.1	20.1	17.4	(8.8)	7.5
<i>Mydeco Stock Price</i>	\$7.92	\$3.30	\$5.25	\$8.71	\$10.89

The Income Statement

11. Suppose that in 2013, Global launches an aggressive marketing campaign that boosts sales by 15%. However, their operating margin falls from 5.57% to 4.50%. Suppose that they have no other income, interest expenses are unchanged, and taxes are the same percentage of pretax income as in 2012.
 - a. What is Global's EBIT in 2013?
 - b. What is Global's net income in 2013?
 - c. If Global's P/E ratio and number of shares outstanding remains unchanged, what is Global's share price in 2013?
12. Find online the annual 10-K report for Peet's Coffee and Tea (PEET) for fiscal year 2011 (filed in January 2012). Answer the following questions from their income statement:
 - a. What were Peet's revenues for fiscal year 2011? By what percentage did revenues grow from the prior year?
 - b. What was Peet's operating income for the fiscal year?
 - c. What was Peet's average tax rate for the year?
 - d. What were Peet's diluted earnings per share in fiscal year 2011? What number of shares is this EPS based on?
13. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp.
 - a. By what percentage did Mydeco's revenues grow each year from 2010 to 2013?
 - b. By what percentage did net income grow each year?
 - c. Why might the growth rates of revenues and net income differ?
14. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp. Suppose Mydeco repurchases 2 million shares each year from 2010 to 2013. What would its earnings per share be in years 2010–2013? (Assume Mydeco pays for the shares using its available cash and that Mydeco earns no interest on its cash balances.)
15. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp. Suppose Mydeco had purchased additional equipment for \$12 million at the end of 2010, and this equipment was depreciated by \$4 million per year in 2011, 2012, and 2013. Given Mydeco's tax rate of 35%, what impact would this additional purchase have had on Mydeco's net income in years 2010–2013? (Assume the equipment is paid for out of cash and that Mydeco earns no interest on its cash balances.)
16. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp. Suppose Mydeco's costs and expenses had been the same fraction of revenues in 2010–2013 as they were in 2009. What would Mydeco's EPS have been each year in this case?
17. Suppose a firm's tax rate is 35%.
 - a. What effect would a \$10 million operating expense have on this year's earnings? What effect would it have on next year's earnings?
 - b. What effect would a \$10 million capital expense have on this year's earnings if the capital is depreciated at a rate of \$2 million per year for five years? What effect would it have on next year's earnings?
- *18. Quisco Systems has 6.5 billion shares outstanding and a share price of \$18. Quisco is considering developing a new networking product in house at a cost of \$500 million. Alternatively, Quisco can acquire a firm that already has the technology for \$900 million worth (at the current price) of Quisco stock. Suppose that absent the expense of the new technology, Quisco will have EPS of \$0.80.
 - a. Suppose Quisco develops the product in house. What impact would the development cost have on Quisco's EPS? Assume all costs are incurred this year and are treated as an R&D expense, Quisco's tax rate is 35%, and the number of shares outstanding is unchanged.
 - b. Suppose Quisco does not develop the product in house but instead acquires the technology. What effect would the acquisition have on Quisco's EPS this year? (Note that acquisition expenses do not appear directly on the income statement. Assume the firm was acquired at the start of the year and has no revenues or expenses of its own, so that the only effect on EPS is due to the change in the number of shares outstanding.)

- c. Which method of acquiring the technology has a smaller impact on earnings? Is this method cheaper? Explain.

The Statement of Cash Flows

19. Find online the annual 10-K report for Peet's Coffee and Tea (PEET) for fiscal year 2011 (filed in January 2012). Answer the following questions from their cash flow statement:
 - a. How much cash did Peet's generate from operating activities in fiscal year 2011?
 - b. What was Peet's total depreciation and amortization expense?
 - c. How much cash was invested in new property and equipment (net of any sales)?
 - d. How much did Peet's raise from the sale of shares of its stock (net of any purchases)?
20. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp.
 - a. From 2009 to 2013, what was the total cash flow from operations that Mydeco generated?
 - b. What fraction of the total in (a) was spent on capital expenditures?
 - c. What fraction of the total in (a) was spent paying dividends to shareholders?
 - d. What was Mydeco's total retained earnings for this period?
21. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp.
 - a. In what year was Mydeco's net income the lowest?
 - b. In what year did Mydeco need to reduce its cash reserves?
 - c. Why did Mydeco need to reduce its cash reserves in a year when net income was reasonably high?
22. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp. Use the data from the balance sheet and cash flow statement in 2009 to determine the following:
 - a. How much cash did Mydeco have at the end of 2008?
 - b. What were Mydeco's accounts receivable and inventory at the end of 2008?
 - c. What were Mydeco's total liabilities at the end of 2008?
 - d. Assuming goodwill and intangibles were equal in 2008 and 2009, what was Mydeco's net property, plant, and equipment at the end of 2008?
23. Can a firm with positive net income run out of cash? Explain.
24. Suppose your firm receives a \$5 million order on the last day of the year. You fill the order with \$2 million worth of inventory. The customer picks up the entire order the same day and pays \$1 million upfront in cash; you also issue a bill for the customer to pay the remaining balance of \$4 million in 30 days. Suppose your firm's tax rate is 0% (i.e., ignore taxes). Determine the consequences of this transaction for each of the following:
 - a. Revenues b. Earnings c. Receivables d. Inventory e. Cash
25. Nokela Industries purchases a \$40 million cyclo-converter. The cyclo-converter will be depreciated by \$10 million per year over four years, starting this year. Suppose Nokela's tax rate is 40%.
 - a. What impact will the cost of the purchase have on earnings for each of the next four years?
 - b. What impact will the cost of the purchase have on the firm's cash flow for the next four years?

Other Financial Statement Information

26. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp.
 - a. What were Mydeco's retained earnings each year?
 - b. Using the data from 2009, what was Mydeco's total stockholders' equity in 2008?
27. Find online the annual 10-K report for Peet's Coffee and Tea (PEET) for fiscal year 2011 (filed in January 2012). Answer the following questions from the notes to their financial statements:
 - a. What was Peet's inventory of green coffee at the end of 2011?
 - b. What property does Peet's lease? What are the minimum lease payments due in 2012?
 - c. What was the fair value of all stock-based compensation Peet's granted to employees in 2011? How many stock options did Peet's have outstanding at the end of 2011?
 - d. What fraction of Peet's 2011 sales came from specialty sales rather than its retail stores? What fraction came from coffee and tea products?

Financial Statement Analysis

28. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp.
 - a. What were Mydeco's gross margins each year?
 - b. Comparing Mydeco's gross margin, EBIT margin, and net profit margin in 2009 and 2013, which margins improved?
29. In fiscal year 2011, Starbucks Corporation (SBUX) had revenue of \$11.70 billion, gross profit of \$6.75 billion, and net income of \$1.25 billion. Peet's Coffee and Tea (PEET) had revenue of \$372 million, gross profit of \$72.7 million, and net income of \$17.8 million.
 - a. Compare the gross margins for Starbucks and Peet's.
 - b. Compare the net profit margins for Starbucks and Peet's.
 - c. Which firm was more profitable in 2011?
30. In mid-2012, Apple had cash and short-term investments of \$27.65 billion, accounts receivable of \$14.30 billion, current assets of \$51.94 billion, and current liabilities of \$33.06 billion.
 - a. What was Apple's current ratio?
 - b. What was Apple's quick ratio?
 - c. What was Apple's cash ratio?
 - d. In mid-2012, Dell had a cash ratio of 0.67, a quick ratio of 1.11 and a current ratio of 1.35. What can you say about the asset liquidity of Apple relative to Dell?
31. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp.
 - a. How did Mydeco's accounts receivable days change over this period?
 - b. How did Mydeco's inventory days change over this period?
 - c. Based on your analysis, has Mydeco improved its management of its working capital during this time period?
32. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp.
 - a. Compare Mydeco's accounts payable days in 2009 and 2013.
 - b. Did this change in accounts payable days improve or worsen Mydeco's cash position in 2013?
33. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp.
 - a. By how much did Mydeco increase its debt from 2009 to 2013?
 - b. What was Mydeco's EBITDA/Interest coverage ratio in 2009 and 2013? Did its coverage ratio ever fall below 2?
 - c. Overall, did Mydeco's ability to meet its interest payments improve or decline over this period?
34. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp.
 - a. How did Mydeco's book debt-equity ratio change from 2009 to 2013?
 - b. How did Mydeco's market debt-equity ratio change from 2009 to 2013?
 - c. Compute Mydeco's debt-to-enterprise value ratio to assess how the fraction of its business that is debt financed has changed over the period.
35. Use the data in Problem 8 to determine the change, from 2009 to 2012, in GE's
 - a. book debt-equity ratio.
 - b. market debt-equity ratio.
36. You are analyzing the leverage of two firms and you note the following (all values in millions of dollars):

	Debt	Book Equity	Market Equity	EBIT	Interest Expense
Firm A	500	300	400	100	50
Firm B	80	35	40	8	7

- a. What is the market debt-to-equity ratio of each firm?
- b. What is the book debt-to-equity ratio of each firm?
- c. What is the EBIT/interest coverage ratio of each firm?
- d. Which firm may have more difficulty meeting its debt obligations? Explain.

37. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp.
- Compute Mydeco's PE ratio each year from 2009 to 2013. In which year was it the highest?
 - What was Mydeco's Enterprise Value to EBITDA ratio each year? In which year was it the highest?
 - What might explain the differing time pattern of the two valuation ratios?
38. In mid-2012, United Airlines (UAL) had a market capitalization of \$6.8 billion, debt of \$12.4 billion, and cash of \$7.3 billion. United also had annual revenues of \$37.4 billion. Southwest Airlines (LUV) had a market capitalization of \$6.6 billion, debt of \$3.3 billion, cash of \$3.3 billion, and annual revenues of \$17.0 billion.
- Compare the market capitalization-to-revenue ratio (also called the price-to-sales ratio) for United Airlines and Southwest Airlines.
 - Compare the enterprise value-to-revenue ratio for United Airlines and Southwest Airlines.
 - Which of these comparisons is more meaningful? Explain.
39. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp.
- Compute Mydeco's ROE each year from 2009 to 2013.
 - Compute Mydeco's ROA each year from 2009 to 2013.
 - Which return is more volatile? Why?
40. See Table 2.5 showing financial statement data and stock price data for Mydeco Corp. Was Mydeco able to improve its ROIC in 2013 relative to what it was in 2009?
41. For fiscal year 2011, Peet's Coffee and Tea (PEET) had a net profit margin of 4.78%, asset turnover of 1.73, and a book equity multiplier of 1.21.
- Use this data to compute Peet's ROE using the DuPont Identity.
 - If Peet's managers wanted to increase its ROE by one percentage point, how much higher would their asset turnover need to be?
 - If Peet's net profit margin fell by one percentage point, by how much would their asset turnover need to increase to maintain their ROE?
42. For fiscal year 2011, Starbucks Corporation (SBUX) had total revenues of \$11.70 billion, net income of \$1.25 billion, total assets of \$7.36 billion, and total shareholder's equity of \$4.38 billion.
- Calculate the Starbucks' ROE directly, and using the DuPont Identity.
 - Comparing with the data for Peet's in Problem 41, use the DuPont Identity to understand the difference between the two firms' ROEs.
43. Consider a retailing firm with a net profit margin of 3.5%, a total asset turnover of 1.8, total assets of \$44 million, and a book value of equity of \$18 million.
- What is the firm's current ROE?
 - If the firm increased its net profit margin to 4%, what would be its ROE?
 - If, in addition, the firm increased its revenues by 20% (while maintaining this higher profit margin and without changing its assets or liabilities), what would be its ROE?

Financial Reporting in Practice

44. Find online the annual 10-K report for Peet's Coffee and Tea (PEET) for fiscal year 2011 (filed in January 2012).
- Which auditing firm certified these financial statements?
 - Which officers of Peet's certified the financial statements?
45. WorldCom reclassified \$3.85 billion of operating expenses as capital expenditures. Explain the effect this reclassification would have on WorldCom's cash flows. (*Hint:* Consider taxes.) WorldCom's actions were illegal and clearly designed to deceive investors. But if a firm could legitimately choose how to classify an expense for tax purposes, which choice is truly better for the firm's investors?