

SOLUTIONS MANUAL



FUNDAMENTALS OF
Corporate Finance



Jonathan
BERK

Peter
DEMARZO

Jarrad
HARFORD

Chapter 2

Introduction to Financial Statement Analysis

- 2-1.** In a firm's 10-K filing, four financial statements can be found: the balance sheet, the income statement, the statement of cash flows, and the statement of stockholders' equity. Financial statements in form 10-K are required to be audited by a neutral third party, who checks and ensures that the financial statements are prepared according to GAAP and that the information contained is reliable.
- 2-2.** Users of financial statements include present and potential investors, financial analysts, and other interested outside parties (such as lenders, suppliers and other trade creditors, and customers). Financial managers within the firm also use the financial statements when making financial decisions.
- Investors. Investors are concerned with the risk inherent in and return provided by their investments. Bondholders use the firm's financial statements to assess the ability of the company to make its debt payments. Stockholders use the statements to assess the firm's profitability and ability to make future dividend payments.
- Financial analysts. Financial analysts gather financial information, analyze it, and make recommendations. They read financial statements to determine a firm's value and project future earnings, so that they can provide guidance to businesses and individuals to help them with their investment decisions.
- Managers. Managers use financial statement to look at trends in their own business, and to compare their own results with that of competitors.
- 2-3.** Each method will help find the same SEC filings. Yahoo finance also provides some analysis such as charts and key statistics.
- 2-4.**
- Long-term liabilities would decrease by \$20 million, and cash would decrease by the same amount. The book value of equity would be unchanged.
 - Inventory would decrease by \$5 million, as would the book value of equity.
 - Long-term assets would increase by \$10 million, cash would decrease by \$5 million, and long-term liabilities would increase by \$5 million. There would be no change to the book value of equity.
 - Accounts receivable would decrease by \$3 million, as would the book value of equity.
 - This event would not affect the balance sheet.
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- 2-5.** Global Conglomerate's book value of equity increased by \$1 million from 2004 to 2005. An increase in book value does not necessarily indicate an increase in Global's share price. The market value of a stock does not depend on the historical cost of the firm's assets, but on investors' expectation of the firm's future performance. There are many events that may affect Global's future profitability, and hence its share price, that do not show up on the balance sheet.

2-6.

- a. Market Capitalization = 10.6 billion \times \$36 = \$381.6 billion

$$\text{Market-to-book ratio} = \frac{381.6}{113} = 3.38$$

- b. Book debt-equity ratio = $\frac{370}{113} = 3.27$

$$\text{Market debt-equity ratio} = \frac{370}{381.6} = 0.97$$

- c. Enterprise value = 381.6 + 370 – 13 = 738.6

2-7.

- a. At the start of 2005, Peet's had cash and cash equivalents of \$11.356 million.
- b. Peet's total assets were \$127.889 million.
- c. Peet's total liabilities were \$18.762 million, and it had no debt.
- d. The book value of Peet's equity was \$109.127 million.

2-8.

- a. Peet's revenues for 2004 were \$145.683 million.

$$\text{Increase in revenues} = \frac{145,683}{119,816} - 1 = 21.59\%$$

- b. Operating margin (2004) = $\frac{13,133}{145,683} = 9.01\%$

$$\text{Operating margin (2003)} = \frac{7,496}{119,816} = 6.26\%$$

$$\text{Net profit margin (2004)} = \frac{8,785}{145,683} = 6.03\%$$

$$\text{Net profit margin (2003)} = \frac{5,178}{119,816} = 4.32\%$$

- c. Both margins increased compared with the year before. The diluted earnings per share in 2004 was \$0.63. The number of shares used in calculation of diluted EPS was 13.951 million.

2-9.

- a. Revenues in 2006 = 1.15 \times 186.7 = \$214.705 million.

$$\text{EBIT} = 4.50\% \times 214.705 = \$9.66 \text{ million (there is no other income).}$$

- b. Net Income = EBIT – Interest Expenses – Taxes = (9.66 – 7.7) \times (1 – 26%) = \$1.45 million.

- c. Share price = (P/E Ratio in 2005) \times (EPS in 2006) = 25.2 \times $\left(\frac{1.45}{3.6}\right)$ = \$10.15

2-10.

- a. A \$10 million operating expense would be immediately expensed, increasing operating expenses by \$10 million. This would lead to a reduction in taxes of $35\% \times \$10 \text{ million} = \3.5 million . Thus, earnings would decline by $10 - 3.5 = \$6.5 \text{ million}$. There would be no effect on next year's earnings.
- b. Capital expenses do not affect earnings directly. However, the depreciation of \$2 million would appear each year as an operating expense. With a reduction in taxes of $2 \times 35\% = \$0.7 \text{ million}$, earnings would be lower by $2 - 0.7 = \$1.3 \text{ million}$ for each of the next 5 years.

2-11.

- a. If Quisco develops the product in house, its earnings would fall by $\$500 \times (1 - 35\%) = \325 million . With no change to the number of shares outstanding, its EPS would decrease by $\$0.05 = \frac{\$325}{6500}$ to \$0.75. (Assume the new product would not change this year's revenues.)
- b. If Quisco acquires the technology for \$900 million worth of its stock, it will issue $\$900 / 18 = 50 \text{ million}$ new shares. Since earnings without this transaction are $\$0.80 \times 6.5 \text{ billion} = \5.2 billion , its EPS with the purchase is $\frac{5.2}{6.55} = \$0.794$.
- c. Acquiring the technology would have a smaller impact on earnings. But this method is not cheaper. Developing it in house is less costly and provides an immediate tax benefit. The earnings impact is not a good measure of the expense. In addition, note that because the acquisition permanently increases the number of shares outstanding, it will reduce Quisco's earnings per share in future years as well.

2-12.

- a. Market capitalization-to-revenue ratio

$$= \frac{2.3}{18.9} = 0.12 \text{ for American Airlines}$$

$$= \frac{5.2}{13.6} = 0.38 \text{ for British Airways}$$

- b. Enterprise value-to-revenue ratio

$$= \frac{(2.3 + 14.3 - 3.1)}{18.9} = 0.71 \text{ for American Airlines}$$

$$= \frac{(5.2 + 8.0 - 2.9)}{13.6} = 0.76 \text{ for British Airways}$$

- c. The market capitalization to revenue ratio cannot be meaningfully compared when the firms have different amounts of leverage, as market capitalization measures only the value of the firm's equity. The enterprise value to revenue ratio is therefore more useful when firm's leverage is quite different, as it is here.

2-13.

- a. Net cash provided by operating activities was \$18.337 million in 2004.
- b. Depreciation and amortization expenses were \$6.899 million in 2004.
- c. Net cash used in new property and equipment was \$38.984 million in 2004.
- d. Net cash provided by financing activities was \$1.740 million, in which \$1.647 million was raised from the sale of its stock.

2-14. A firm can have positive net income but still run out of cash. For example, to expand its current production, a profitable company may spend more on investment activities than it generates from operating activities and financing activities. Net cash flow for that period would be negative, although its net income is positive. It could also run out of cash it spends a lot on financing activities, perhaps by paying off other maturing long-term debt, repurchasing share, or paying dividends.

2-15.

- a. Heinz's cumulative earnings over these four quarters was \$753 million. Its cumulative cash flows from operating activities was \$1.19 billion.
- b. Fraction of cash from operating activities used for investment over the 4 quarters:

	27-Apr-05	26-Jan-05	27-Oct-04	28-Jul-04	4 quarters
Operating Activities	654,647	126,584	221,578	186,180	1,188,989
Investing Activities	-138,922	-72,601	-18,063	-34,468	-264,054
CFI/CFO	21.22%	57.35%	8.15%	18.51%	22.21%

- c. Fraction of cash from operating activities used for financing over the 4 quarters:

	27-Apr-05	26-Jan-05	27-Oct-04	28-Jul-04	4 quarters
Operating Activities	654,647	126,584	221,578	186,180	1,188,989
Financing Activities	-210,683	-518,856	-160,954	-160,392	-1,050,885
CFF/CFO	32.18%	410%	72.64%	86.15%	88.38%

2-16.

- a. Revenues: increase by \$5 million
- b. Earnings: increase by \$3 million
- c. Receivables: increase by \$4 million
- d. Inventory: decrease by \$2 million
- e. Cash: increase by \$3 million (earnings) – \$4 million (receivables) + \$2 million (inventory) = \$1 million (cash).

2-17.

- a. Earnings for the next 4 years would have to deduct the depreciation expense. After taxes, this would lead to a decline of $10 \times (1 - 40\%) = \$6$ million each year for the next 4 years.
- b. Cash flow for the next four years: less \$36 million ($-6 + 10 - 40$) this year, and add \$4 million ($-6 + 10$) for three following years.

2-18.

- a. The book value of Clorox's equity decreased by \$2.101 billion compared with that at the end of previous quarter, and was negative.
- b. Because the book value of equity is negative in this case, Clorox's market-to-book ratio and its book debt-equity ratio are not meaningful. Its market debt-equity ratio may be used in comparison.
- c. Information from the statement of cash flows helped explain that the decrease of book value of equity resulted from an increase in debt that was used to repurchase \$2.110 billion worth of the firm's shares.
- d. Negative book value of equity does not necessarily mean the firm is unprofitable. Loss in gross profit is only one possible cause. If a firm borrows to repurchase shares or invest in intangible assets (such as R&D), it can have a negative book value of equity.

2-19.

- a. Peet's net income in 2004 after deducting fair value of options granted to employees was \$4.502 million, compared with reported net income of \$8.785 million. (Note 2)
- b. Peet's inventory of raw materials at the end of 2004 was \$7.416 million. (Note 3)
- c. The fair value of Peet's marketable securities at the end of 2004 was \$52.057 million. (Note 5)
- d. As note 11 in 10-K report stated, "The Company leases its Emeryville, California coffee roasting plant, distribution center, administrative offices, and warehouse, its retail stores and certain equipment..." The minimum lease payments due in 2005 are \$7.537 million.
- e. Peet's granted 576,754 shares of stock options in 2004. (Note 10)
- f. Sales from whole bean coffee, tea, and related products was \$86.270 million or 59.22%, and from beverages and pastries was \$59.413 million or 40.78%. (Note 13)

2-20.

- a. Deloitte & Touche LLP audited these financial statements.
- b. Peet's Chief Executive Officer, Chief Financial Officer, and board of directors certified the financial statements.

2-21.

By reclassifying \$3.85 billion operating expenses as capital expenditures, Worldcom increased its net income but lowered its cash flow for that period. If a firm could legitimately choose how to classify an expense, expensing as much as possible in a profitable period rather than capitalizing them will save more on taxes, which results in higher cash flows, and thus is better for the firm's investors.

