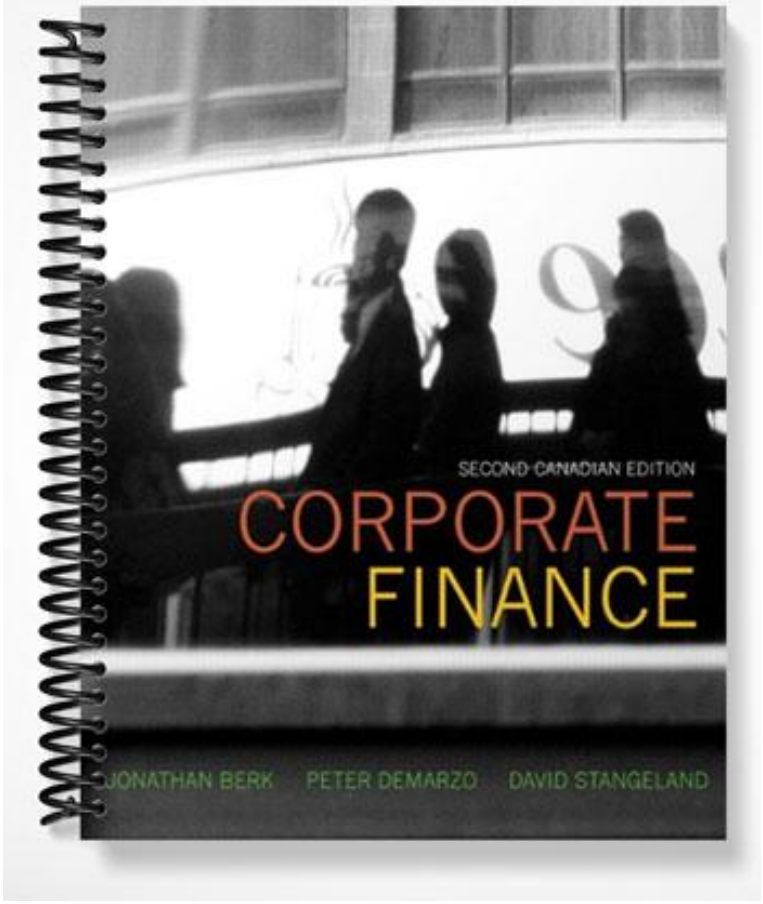
SOLUTIONS MANUAL



Chapter 2

Introduction to Financial Statement Analysis

2-1. In a firm's annual report, five financial statements can be found: the balance sheet, the income statement, the statement of cash flows, the statement of stockholders' equity, and the statement of comprehensive income. Financial statements in the annual report are required to be audited by a neutral third party, who checks and ensures that the financial statements are prepared according to GAAP (or IFRS) 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. Shareholders 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 filings. Yahoo finance also provides some analysis such as charts and key statistics.

2-4.

a. Long-term liabilities would decrease by $20 million, and cash would decrease by the same amount. The book value of equity would be unchanged.

b. Inventory would decrease by $5 million, as would the book value of equity.

c. 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.

d. Accounts receivable would decrease by $3 million, as would the book value of equity.

e. This event would not affect the balance sheet.

f. This event would not affect the balance sheet.

2-5. Global Conglomerate's book value of equity increased by $1 million from 2010 to 2011. 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. $2,717 million (cash) and $8,352 million (short-term investments/marketable securities) for a total of $11,069 million

b. $700 million

c. $27,445 million

d. 7,129 million, nothing

e. $20,316 million

2-7.

a. At the end of 2008, Peet's had cash and cash equivalents of $4.719 million.

b. Peet's total assets were $176.352 million.

c. Peet's total liabilities were $32.445 million, and it had no debt.

d. The book value of Peet's equity was $143.907 million

2-8.

a. 2005 Market Capitalization: 10.6 billion shares x $36.00/share = $381.6 billion. 2009 Market Capitalization: 10.5 billion shares x $10.80/share = $113.4. The change over the period is $113.4 - $381.6 = -$268.2 billion.

b. 2005 Market-to-Book $= \frac{381.6}{113} = 3.38$. 2009 Market-to-Book $= \frac{113.4}{105} = 1.08$. The change over the period is: 1.08 – 3.38 = -2.3.

c. 2005 Book Debt-to-Equity $= \frac{370}{113} = 3.27$. 2009 Book Debt-to-Equity $= \frac{524}{105} = 4.99$. The change over the period is: 4.99 – 3.27 = 1.72.

d. 2005 Market Debt-to-Equity $= \frac{370}{381.6} = 0.97$. 2009 Market Debt-to-Equity $= \frac{524}{113.4} = 4.62$. The change over the period is: 4.62 – 0.97 = 3.65.

e. 2005 Enterprise Value = $381.6 - 13 + 370 = $738.6 billion. 2009 Enterprise Value = $113.4 - 48 + 524 = $589.4 billion. The change over the period is: $589.4 – 738.6 = - $149.2 billion.

2-9.

a. Apple's current ratio $= \frac{18.75}{6.99} = 2.68$

b. Apple's quick ratio $= \frac{18.75 - 0.25}{6.99} = 2.65$

c. Apple has significantly more liquid assets than Dell relative to current liabilities.

2-10.

a. ANF's market-to-book ratio $= \frac{75.01 \times 86.67}{1{,}458} = 4.59$

$$\text{GPS's market-to-book ratio} = \frac{20.09 \times 798.22}{5{,}194} = 3.09$$

b. The market values, in a relative sense, the outlook of Abercrombie and Fitch more favorably than it does The Gap. For every dollar of equity invested in ANF, the market values that dollar today at \$4.59 versus \$3.09 for a dollar invested in the GPS. Equity investors are willing to pay relatively more today for shares of ANF than for GPS because they expect ANF to produce superior performance in the future.

2-11.

a. $$\text{Increase in revenues} = \frac{284{,}822}{249{,}349} - 1 = 14.23\%$$

b. $$\text{Operating margin (2007)} = \frac{11{,}606}{249{,}349} = 4.66\%$$

$$\text{Operating margin (2008)} = \frac{17{,}001}{284{,}822} = 5.97\%$$

$$\text{Net profit margin (2007)} = \frac{8{,}377}{249{,}349} = 3.36\%$$

$$\text{Net profit margin (2008)} = \frac{11{,}165}{284{,}822} = 3.92\%$$

Both margins increased compared with the year before.

c. The diluted earnings per share in 2008 was \$0.80. The number of shares used in this calculation of diluted EPS was 13.997 million.

2-12.

a. Revenues in 2012 = 1.15 × 186.7 = \$214.705 million.

EBIT = 4.50% × 214.705 = \$9.66 million (there is no other income).

b. Net Income in 2012 = EBIT – Interest Expenses – Taxes = (9.66 – 7.7) × (1 – 26%) = \$1.45 million.

c. Share price = (P/E Ratio in 2011) × (EPS in 2012) = $25.2 \times \left(\frac{1.45}{3.6}\right)$ = \$10.15

2-13.

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% × \$10 million = \$3.5 million. Thus, earnings would decline by 10 – 3.5 = \$6.5 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 × 35% = \$0.7 million, earnings would be lower by 2 – 0.7 = \$1.3 million for each of the next 5 years.

2-14.

a. **Firm A:** Market debt-equity ratio $= \frac{500}{400} = 1.25$

Firm B: Market debt-equity ratio $= \frac{80}{40} = 2.00$

b. **Firm A:** Book debt-equity ratio $= \frac{500}{300} = 1.67$

Firm B: Book debt-equity ratio $= \frac{80}{35} = 2.29$

c. **Firm A:** Interest coverage ratio $= \frac{100}{50} = 2.00$

Firm B: Interest coverage ratio $= \frac{8}{7} = 1.14$

d. Firm B has a lower coverage ratio and will have slightly more difficulty meeting its debt obligations than Firm A.

2-15.

a. If Quisco develops the product in house, its earnings would fall by \$500 × (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 million new shares. Since earnings without this transaction are \$0.80 × 6.5 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.

2-16.

a. Market capitalization-to-revenue ratio

$= \frac{1.7}{23.8} = 0.07$ for American Airlines

$= \frac{2.2}{13.1} = 0.17$ for British Airways

b. Enterprise value-to-revenue ratio

$= \frac{(1.7 + 11.1 - 4.6)}{23.8} = 0.35$ for American Airlines

$$= \frac{(2.2 + 4.7 - 2.6)}{13.1} = 0.33 \text{ for British Airways}$$

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.

2-17.

a. $\text{Net profit margin} = \frac{11,165}{284,822} = 3.92\%$

$\text{Asset Turnover} = \frac{284,822}{176,352} = 1.62$

$\text{Asset Multiplier} = \frac{176,352}{143,907} = 1.23$

b. Peet's ROE (DuPont) $= 3.92\% \times 1.62 \times 1.23 = 7.81\%$

c. Peet's Revised ROE = 3.92% × 1.83 × 1.23 = 8.82%.

Peet's would need to increase asset turnover to 1.83 times.

d. Peet's Maintained ROE = 2.92% × 2.18 × 1.23 = 7.83%.

To maintain ROE at 7.81%, asset turnover would need to increase to 2.18 times (differences due to rounding).

2-18.

$\text{Net profit margin} = \frac{315.5}{10,383.0} = 3.04\%$

$\text{Asset Turnover} = \frac{10,383}{5,672.6} = 1.83$

$\text{Asset Multiplier} = \frac{5,673.6}{2,490.9} = 2.28$

Starbucks's ROE (DuPont) = 3.04% x 1.83% x 2.28% = 12.67%

The two firms' ROEs differ mainly because the firms have different asset multipliers, implying that the difference in the ROE might be due to leverage.

2-19.

a. 3.5 x 1.8 x 44/18 = 15.4%

b. 4 x 1.8 x 44/18 = 17.6%

c. 4 x (1.8*1.2) x 44/18 = 21.1%

2-20.

a. Net cash provided by operating activities was $20.133 million in 2007.

b. Depreciation and amortization expenses were $12.861 million in 2007.

c. Net cash **used** in new property and equipment was 30.824-0.023 = $30.801 million in 2007.

d. Net cash of $7.322 million was raised from the sale of shares of its stock in 2007.

2-21. 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 if it spends a lot on financing activities, perhaps by paying off other maturing long-term debt, repurchasing shares, or paying dividends.

2-22.

a. Heinz's cumulative earnings over these four quarters was $918 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:

	29-Oct-08	30-Jul-08	30-Apr-08	30-Jan-08	4 quarters
Operating Activities	227,502	–13,935	717,635	254,534	1,185,736
Investing Activities	–196,952	–35,437	–251,331	–96,848	–580,568
CFI/CFO	86.57%	–254.30%	35.02%	38.05%	48.96%

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

	29-Oct-08	30-Jul-08	30-Apr-08	30-Jan-08	4 quarters
Operating Activities	227,502	–13,935	717,635	254,534	1,185,736
Financing Activities	462,718	–13,357	–526,189	–96,044	–1,050,885
CFF/CFO	–203.39%	–95.85%	79.32%	37.73%	14.58%

2-23.

a. Revenues: increase by $5 million

b. Earnings: increase by $3 million

c. Receivables: increase by $4 million

d. Inventory: decreases by $2 million

e. Cash: increases by $3 million (earnings) – $4 million (receivables) + $2 million (inventory) = $1 million (cash).

2-24.

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.

2-25.

a. The book value of Clorox's equity decreased by $2.101 billion compared with that at the end of the 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.

2-26.

a. Peet's net income in 2008 after deducting the fair value of options granted to employees was $11.165 million, whereas if stock-based compensation had not been deducted, it would have been 11.165+2.711 = $13.876 million.

b. Peet's inventory at the end of 2008 was $26.124 million.

c. The fair value of Peet's marketable securities at the end of 2008 was 8,600 million.

d. Peet's leases its Emeryville, California, administrative offices and its retail stores and certain equipment under operating leases that expire from 2009 through 2019. The minimum lease payments due in 2009 are $15.222 million.

e. Peet's granted 351,464 shares of stock options in 2008. (Note 8)

f. Sales from whole bean coffee, tea, and related products were $151.059 million or 53.0%, and from beverages and pastries was $133,763 million or 47.0%. (Note 11)

2-27.

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.

2-28. By reclassifying $3.85 billion of 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.