CHAPTER 5   Using Financial Statement Information

SYNOPSIS

In this chapter, the author discusses ways in which information contained within financial statements may be used to evaluate a company. The author discusses how financial statements can be useful in (1) helping investors and creditors influence and monitor the business decisions of a company’s managers, and (2) helping to predict a company’s future earnings and cash flows.

The discussion on using the financial statements focuses on the elements of financial statement analysis: (1) assessing the business environment; (2) reading and studying the financial statements and footnotes; (3) assessing earnings quality; (4) analyzing the financial statements; and (5) predicting future earnings and/or cash flows.

The author discusses ways to analyze a company’s financial statements (through ratio analysis) and emphasizes the importance of comparisons across time and within the industry. Comparisons within the financial statements are covered in detail and include (1) common-size financial statements; (2) profitability ratios; (3) leverage ratios; (4) solvency ratios; (5) asset turnover ratios; and (6) market ratios.

The chapter includes a thorough discussion on the limitations of financial statements and an overview of financial statement analysis in an international setting. Appendix 5A contains a framework designed to help in the analysis of ratios as a package (called the DuPont model). It also describes the basics of cash flow analysis.

The ethics vignette considers four business practices in the internet world that are possible violations of ethical business behavior.

The Internet research exercise directs the student to consider the usefulness of information provided to analysts by financial information services.

The following key points are emphasized in Chapter 5:

1. Using financial accounting numbers to influence management decisions and predict future events.

2. Five steps of financial statement analysis.

3. Assessing the business environment.


5. Analyzing financial statements.

6. Difficulties involved in using annual report information to identify mispriced securities.

7. Difficulties involved in using financial statements to compare the performance of companies operating in different countries.
LECTURE/TEXT OUTLINE

Using financial statement information.

I. Control and prediction - usefulness of financial accounting numbers.
   A. Influencing and monitoring business decisions of a company’s managers.
      1. Equity investors can influence management’s business decisions by basing a large portion of management’s compensation on reported profits.
      2. Debt investors can influence management’s business decisions through debt covenants.
   B. Framework for using financial statements to predict future earnings and cash flows.
      1. Equity investors use financial information to predict future earnings and cash flows in their efforts to identify securities that will provide high returns.
      2. Creditors use financial information to predict whether companies can generate enough cash in the future to cover debt payments.
      3. Future cash flows are the heart of a company’s true value, which is of interest to both investors and creditors. The following three reasons can cause a company’s reported book value and true value to differ:
         a) Business environment.
         b) Unrecorded events.
         c) Management bias.

II. Elements of financial statement analysis.
   A. Assessing the business environment.
      1. Learn about the company, its industry, and how these relate to the overall economy.
   B. Reading and studying the financial statements and footnotes.
      1. The audit report.
      2. Significant transactions and important segments.
      3. The financial statements and footnotes.
   C. Assessing earnings quality.
1. Quality of earnings—the degree to which a company’s reported earnings diverge from its “true” operating earnings because management exercised its discretionary influence over reported accounting numbers.

2. Ways for management to “manage” financial accounting numbers.
   a) Overstating operating performance.
   b) Taking a “bath.”
   c) Creating hidden reserves.
   d) Employing off-balance-sheet financing.

3. Assessing earnings quality also includes considering unrecorded events and the other inherent limitations of financial statements.
   a) The value of human resources (i.e., human capital) is not included in the financial statements.
   c) The value of intangibles in technology-oriented companies is not reported in the financial statements.
   d) Few market values are used in the financial statements.

D. Analyzing the financial statements.
   1. Comparisons across time.
   2. Comparisons within the industry.
   3. Comparisons within the financial statements: common-size statements and ratio analysis.

E. Common-size financial statements.
   1. Financial statement numbers are expressed as percentages of other financial statement numbers.
   2. Benefits of common-size financial statements.
      a) Provides relative rather than absolute comparisons.
      b) Helps indicate why changes occur in financial performance and condition.

F. Financial ratios.
   1. Ratio analysis is based on the comparison of two or more financial statement numbers.
   2. Categories of ratios.
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a) Profitability ratios.

(1) Profitability ratios are useful in assessing a company’s earning power.

(2) Different profitability ratios.

(a) Return on equity.

i) Ratio of net income to average shareholders’ equity.

ii) Measures the efficiency with which a company manages its shareholders’ investments.

(b) Return on assets.

i) Ratio of the sum of net income and after-tax interest expense to average total assets.

ii) Measures the efficiency with which a company manages both its shareholders’ and its creditors’ investments.

(c) Return on sales (profit margin).

i) Ratio of the sum of net income and after-tax interest expense to net sales.

ii) Provides information on a company’s ability to generate and market profitable products and control its costs. It reflects the number of cents in profit for every dollar of sales.

b) Leverage ratios.

(1) Leverage ratios provide information useful in evaluating a company’s capital structure.

(2) Different leverage ratios.

(a) Common equity leverage.

i) Ratio of net income to the sum of net income and after-tax interest expense.

ii) Compares the return available to the shareholders to the returns available to all capital providers.

(b) Capital structure leverage.
i) Ratio of average total assets to average shareholders' equity.

ii) Measures the extent to which a company relies on borrowings (liabilities).

(c) Debt/equity ratio.

i) Ratio of average total liabilities to average shareholders' equity.

ii) Another way to measure capital structure leverage.

(d) Long-term debt ratio.

i) Ratio of long-term liabilities to total assets.

ii) Indicates the relative importance of long-term liabilities as a source of asset financing.

c) Solvency ratios.

(1) Solvency ratios are useful in assessing a company's ability to meet its debts.

(2) Different solvency ratios.

(a) Current ratio.

i) Ratio of current assets to current liabilities.

ii) Provides a measure of a company's ability to cover its current liabilities with current assets.

(b) Quick ratio.

i) Ratio of quick assets (i.e., cash, marketable securities, and accounts receivable) to current liabilities.

ii) Provides a measure of a company's ability to cover its current liabilities with cash-like assets.

(c) Interest coverage ratio.

i) Ratio of income before interest and taxes plus tax expense and interest expense to interest expense.

ii) Measures a company's ability to meet its interest charges through operations.

(d) Accounts payable turnover.
i) Ratio of cost of goods sold to average accounts payable.

ii) Measures how quickly, on average, suppliers are paid off.

iii) Dividing this ratio into 365 days indicates the number of days, on average, that accounts payable balances remain outstanding.

d) Asset turnover ratios.

(1) Asset turnover ratios provide a measure of the speed with which assets move through operations.

(2) Different asset turnover ratios.

(a) Receivables turnover.
   i) Ratio of net credit sales to average accounts receivable.

   ii) Indicates the number of times receivables are recorded, collected, and recorded again each year.

(b) Inventory turnover.
   i) Ratio of cost of goods sold to average inventory.

   ii) Indicates the number of times inventory is replaced each year.

(c) Fixed assets turnover.
   i) Ratio of sales to average fixed assets.

   ii) Indicates the speed with which fixed assets are used up.

(d) Total asset turnover.
   i) Ratio of sales to average total assets.

   ii) Indicates the speed with which all assets are used up in operations, aggregating the turnover measures of the component assets in (a) to (c).

(3) Each turnover ratio can be converted to "days" by dividing it into 365 days.

e) Other ratios.
(1) Other ratios provide measures of returns to common shareholders due to changes in the market price of common stock and the receipt of dividends.

(2) Most important other ratios.

(a) Earnings per share.
   i) Ratio of net income to the average number of common shares outstanding.
   ii) Standardizes a company’s income, which makes it easier to make comparisons across companies. It provides a measure of a company’s profitability strictly from the common shareholders’ viewpoint.

(b) Price/earnings (P/E) ratio.
   i) Ratio of market price per share to earnings per share.
   ii) Indicates the sensitivity of a company’s stock price to changes in its earnings.

(c) Dividend yield ratio.
   i) Ratio of dividends per share to market price per share.
   ii) Measures the cash return on shareholders’ investments.

(d) Stock price return.
   i) Ratio of the sum of price appreciation per share and dividends per share to market price per share at the beginning of the period.
   ii) Measures the rate of return on common shares for the period.

III. Predicting future earnings and/or cash flow.

IV. Annual report information and predicting stock prices.

V. Financial statement analysis in an international setting.

VI. Shareholder value, ROE, and cash flow analyses (Appendix 5A).
   A. Cost of equity and return on equity.
   B. Determinants of value creation: analyzing return on equity.
   C. Shareholder value creation and the ROE model: JCPenney vs. Kohls.
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D. Cash flow analysis (solvency assessment).
   1. Operating performance.
   2. Financial flexibility.
   3. Liquidity.
E. Cash flow profiles.
F. Predicting future financial statements.

VII. Review problem

VIII. Ethics in the real world.

IX. Internet research exercise.

LECTURE TIPS

1. Students must avoid getting bogged down in computing ratios and must understand what the ratios mean. The purpose of each ratio should be thoroughly discussed and illustrated. Further, it should be stressed that there are no “correct” formulas; the actual formula for a ratio will vary depending upon the needs of the person performing the analysis.

2. Students often try to analyze a company using a single company’s ratios at a particular point in time. It should be stressed that analyzing a company only makes sense across time, across companies, or both.

ANSWERS TO IN-TEXT DISCUSSION QUESTIONS

178. The short term business plans of start-up companies normally recognize the fact that it may take some time for a new venture to become profitable. Nevertheless, financial accounting numbers are still as important for control and prediction for start up companies as they are for established companies. Investors with appetites for high-risk investments offering potential high returns are often attracted to start-ups. Investors' interest in an unprofitable start-up will diminish if the anticipated revenues and cash flows do not appear. Comparisons of planned to actual revenues and cash flows are of major importance to start-ups because they demonstrate whether the plan to become profitable is working or not.

179. The stock market is always forward-looking; it considers the future prospects in the valuation of a company. Historical earnings are used to help predict future earnings and cash flows. The marketplace considers the business environment in which companies operate. Many companies such as Amazon.com, during the introductory phase of their life cycle, reported losses which were not representative of their expected future profits. In the introductory phase, companies generate new products and services through research and development, develop markets through advertising and marketing, and build capacity through capital expenditures. Costs associated with those efforts may
result in current losses, but lead the way to future profits and cash flows which speak to the true value of the company.

180. Intellectual capital (intangible assets) drives many of today’s service and technology businesses, which constitute an increasingly greater portion of our economy. Our accounting model excludes the value associated with intellectual capital, simply because it is not measurable in an objectively verifiable transaction. Some observers believe traditional financial accounting sacrifices the relevancy of information about intellectual capital in favor of objectivity and reliability. Our transactions-based accounting model was designed years ago to measure tangible capital in an industrial-based economy, and not intellectual capital in today’s knowledge-based economy. Consequently, the book value of these companies has little relationship to their market values. The present value of projected future cash flows usually provides a more relevant indication of the price an investor would be willing to pay for an investment in a company having significant intellectual capital. Time will tell whether Rupert Murdoch’s opinion of value was more correct than the market’s. There has been much speculation about Murdoch’s motivations for offering such a premium for the stock in Dow Jones. Some of his motives may not have been purely economic.

181. The present value of projected future cash flows provides relevant indication of the value of an investment in a company. Predictions about future cash flows are outside the scope of generally accepted accounting principles. GAAP is rooted in historical, verifiable fact, where future predictions are only that – guesses about what may happen in the future. Pro-forma numbers based on reasonable expectations are very useful but need to be taken with a grain of salt.

182. Apple Computer’s strategic shift toward providing services in addition to manufacturing traditional hardware will, over time, result in a higher return on assets, more revenues and expenses on the income statement, and better operating cash flows. If the growth into the new areas can be accomplished without incurring debt or raising capital, Apple should see improvements in earnings per share, debt to equity, return on equity as well.

184. Analysts are very much concerned with earnings persistence, which is the extent to which an income statement item reported in the current period can be expected to reflect future earnings. The “icing on the cake” represents significant one-time transactions, such as Dow Jones & Company’s gain on the sale of ONI properties, which may not be expected to recur. The “cake itself” represents core earnings from operations which may be more indicative of future earnings. An analyst is probably more interested in the $3.7 million of net income generated by the company’s recurring operations.

185. The term “aggressive accounting” suggests overstatement of revenues and assets and/or understatement of expenses and liabilities. In other words, “aggressive accounting” is the opposite of conservatism. Because the application of generally accepted accounting principles necessarily involves a great deal of discretion and judgment, it is often difficult to draw the line between that which violates GAAP and that which conforms to GAAP. Accounting that flirts with the idea of defying this imaginary line is what is meant by “aggressive accounting”.

185. “Front loading expenses” is a form of “taking a bath” (see p 172). Expenditures that benefit future periods are mis-matched against current revenues. This distorts current year’s net income by making it look worse than it really is. Management hopes that by
not recognizing these expenses in future years, the financial statements for those years will be improved. The *Business Week* article includes several examples including items described in financial statements as “restructuring charges”, and write-offs of “in-process” research.

186. “Earnings persistence” is an important concept that analysts use to refer to the extent to which an income statement item reported in the current period, such as net income, can be expected to relate closely to future income amounts and be useful in predicting them. A company producing consistent levels of net income over a period of years is more highly valued than an equally profitable company whose net income fluctuates wildly from year to year because the market places a premium on predictability. Management frequently uses its discretion to “smooth” earnings from one year to the next to make them look less volatile. The most common areas for the use of management discretion in financial reporting are areas where the numbers in the financial statements reflect management’s estimates. Some examples include allowances for uncollectible accounts, reserves for warranty costs, impairments of goodwill, contingent liabilities, depreciation, and amortization.

186. Although the legal form of a lease commitment may indicate a rental transaction, the lessee may take on enough of the risks and rewards of ownership, that the lease may in substance be viewed as an asset purchase and related financing. In such a case, the property right under the lease would be recorded as an asset, and the obligation would be recorded as a liability. The income statement would reflect depreciation of the asset and interest on the obligation, rather than rent expense. Issues involved with this important example of off-balance-sheet financing are discussed in Chapter 11.

187. The information about the banks returning to the labor market to hire back laid off investment bankers and traders would not have had a significant immediate impact on their financial statements. Perhaps an increase in compensation expense would cause net income to decline, but it would take some time for this to have an impact. More significant is the message being sent to the market that the banks were targeting new growth. This information would have already been available to the market and priced into the future prospects for the banking industry, on the basis of the previously reported return to profitability. If the market thinks this new growth and profitability is likely to result in sustained success there may be a positive impact on the market price of banks’ stocks. A change in the stock price would not affect the financial statements.

191. Eli Lilly’s earning power has tanked over this period. Return on equity, return on assets and return on sales all sunk in 2008 (which was a bad year for everybody). Eli Lilly incurred a loss for 2008 which was a change from its previous profitability.

192. Both Eli Lilly’s long term debt ratio and capital structure leverage have increased. Because the percentage increase in leverage was higher than the increase in the long term debt ratio, one might conclude that the relative amounts of long term debt, short term debt and equity (as a percentage of total assets) have shifted away from long term debt. In relation to total assets overall debt is up, but not as much as long term debt.

193. Eli Lilly’s current ratio has declined, meaning solvency is impaired. The interest coverage ratio has decreased dramatically, meaning that the availability of funds to meet interest expenses has declined. The speed up in accounts payable turnover means that Lilly is relying less on suppliers as providers of financing.
194. The increase in the number of days to collect accounts receivable means that Lilly's customers are taking longer to pay for their purchases. The reduction in the number of days inventory on hand means that the inventory is moving through the operating cycle faster. The decrease in the number of days to generate sales covering the cost of fixed assets, means that fixed assets are lasting longer, not in terms of time, but in terms of sales volume. The decrease in the number of days for total asset turnover, means that total assets are being employed more efficiently in terms of sales volume.

195. The chart indicates that the value of Lilly stock has performed poorly, with the value declining significantly in 2008. Stock performance for the peer group was not nearly as bad. The S&P index didn't do much better than Lilly but was much worse than the peer group. All three did very poorly in 2008, probably related to the general economic downturn that occurred that year.

196. Some of the variations in the ratios can be explained by the industry and type of business. Some ratios are “NA”, that is, unable to be calculated because one of the components of the ratio is less than zero. Kroger’s accounts receivable turnover ratio is so much higher than Bank of America’s because: 1) Kroger’s terms with their customers require them to pay for their purchases in a relatively short period of time, and 2) Bank of America is in the business of lending money, so they are more willing in providing financing to their customers and allow their customers a longer payment period for the fees they are charged. Bank of America’s capital structure leverage is higher than the other companies represented because they are the only bank represented. Banks borrow money in the form of deposits, then turn around and re-lend their depositors’ money profiting on the spread between the rates they pay and the rates they charge. Banks also derive significant revenue from fees. Most banks have no inventory.