Ch. 3 Answers to Review Questions

3-1. Generally accepted accounting principles (GAAP), the Financial Accounting Standards Board (FASB), and the Public Company Accounting Oversight Board (PCAOB) all play significant roles in the financial reporting of publicly traded firms. GAAP refers to the basic guidelines firms should use in preparing and maintaining financial records and reports; these guidelines are authorized by the FASB— the accounting profession's rule-setting body. The PCAOB is a not-for-profit corporation that oversees auditors of public corporations. Consistency in financial reporting and auditing practices/procedures promotes investor confidence in the financial information firms release to the public.

3-2 The four major financial statements are the:

- *Income Statement*, which summarizes firm operating results over a specified time period. It is a "flow" document— demonstrating whether revenues over a month, quarter, or year exceed costs with sufficient detail to explain profits or losses.
- *Balance Sheet*, which summarizes firm financial condition at a given point in time. It is a "stock" document— noting assets, liabilities and net financial position (owner's stake) on a specific date in detail sufficient to explain why that stake is large or small.
- *Statement of Retained Earnings*, which reconciles net income earned during the year (and any cash dividends paid) with the change in retained earnings from the beginning to the end of the year. It is a condensed version of the statement of stockholders' equity. Retained earnings are important not as a source of surplus funds but rather because they represent reinvestment in the firm. The statement of retained earnings highlights the reason for changes in the level of reinvestment.
- The *Statement of Cash Flows* summarizes cash inflows and outflows experienced by a firm over a specific period (like a month, quarter, or year). In general, inflows and outflows are grouped under three headings: operating, investment, and financing. This statement is important to investors because cash flows, unlike profits, can be used to meet ongoing firm obligations.

3-3 *Notes to the Financial Statements* offer important background details for firm financial statements. Specifically, these notes explain how a firm's accounting policies, procedures, calculations, and transactions have affected specific line items, thereby making financial statements easier to interpret.

3-4 FASB Statement No. 52 governs rules for consolidating a firm's foreign and domestic financial statements. The statement requires U.S.-based companies to translate foreign-currency-denominated assets and liabilities into U.S. dollars using the exchange rate on the last day of the fiscal year (current rate). Income-statement items are treated similarly. Equity accounts, in contrast, are translated into dollars using the exchange rate at the time of the parent's equity investment (historical rate).

3-5 Current and prospective shareholders care about ratios bearing on expected cash flows and uncertainty about those flows because risk and return drive stock price. Creditors, on the other hand, focus on ratios gauging the firm's short-term liquidity and ability to make scheduled interest and principal payments. Management needs to track ratios related to both risk/return and debt service. Managers should focus on maximizing shareholder wealth over the long term, but missing scheduled interest and principal payments could cause bankruptcy and prevent the firm from living past the short term.

3-6 *Cross-sectional analysis* involves comparing performance ratios for different firms at a specific point in time. *Benchmarking* is cross-sectional comparison of one firm's performance ratios with those of a key competitor, group of competitors, or the industry average. *Time-series analysis*, in contrast, looks at the same firm's performance over time (such as quarter-to-quarter or year-over-year).

3-7 An analyst should focus on significant differences between firm ratios and those of a designated peer (competitor, group of competitors, or industry average), irrespective of whether the ratio is above or below the benchmark. For example, above-normal inventory-turnover ratio could indicate highly efficient inventory management or critically low inventory (and lost sales). When benchmarking, an analyst should also examine multiple ratios for a complete picture of each aspect of firm condition.

3-8 Analyzing financial data from different points in the year could lead to inaccurate conclusions because of seasonality. For example, many retailers post more sales in the fourth quarter than in the other three combined because of Christmas. So, comparing sales in the second and fourth quarters for such firms would make the second quarter look extraordinarily weak or the fourth quarter extraordinarily strong.

3-9 The *current ratio* is a better metric when current assets are all reasonably liquid while the *quick ratio* is preferred if the firm operates with high levels of illiquid inventory.

3-10 Most firms listed in Table 3.5 are large players in their industries; such firms typically rely on credit lines with banks for emergency cash. Put another way, small firms "self-insure" against liquidity risk with a high current ratio while large firms insure through bank credit. Whole Foods, as a natural/organic grocery store with an upscale clientele, needs more liquidity than the typical grocery store because of its recession vulnerability. During slowdowns, some Whole Foods' customers switch to traditional grocery stores to save money, so firm sales fall more than competitors. Banks frequently reduce credit lines during recessions to minimize loan losses, so Whole Foods—although a national chain—cannot rely its credit lines to stock fresh/organic products for remaining customers until the economy improves. In short, like small firms, Whole Foods self-insures against liquidity risk.

3-11 Average collection period, or average age of accounts receivable, is useful in evaluating a firms credit and collection policies. It equals accounts receivable divided by average daily sales. Interpreting the ratio (in cross-section or time series analysis) requires context—specifically, what are the firm's credit policies, how do they compare with other firms, and have they changed over time? Average payment period is accounts payable divided by average purchases per day. The difficulty in calculating this ratio is that the denominator—average daily purchases—is not available in firm financial statements.

3-12 *Financial leverage* refers to a firm's reliance on debt (or other types of fixed-cost financing such as preferred stock) to fund ongoing operations. Financial leverage is important because greater reliance on debt can improve returns to shareholders but at the cost of higher bankruptcy risk (i.e., a greater likelihood a cash crunch will leave the firm unable to meet its obligations to creditors).

3-13 The debt and debt-to-equity ratios gauge firm indebtedness (leverage). Specifically, the debt ratio is thepercentage of firm assets financed by debt, while the debt-to-equity ratio is the relative proportion of debt and equity in the firm's funding mix. Higher debt and debt-to-equity ratios correspond to greater financial leverage. Coverage ratios measure ability to service debts and other fixed obligations. Specifically, the times-interest-earned ratio captures the firm's ability to pay interest on its debts, while the fixed-payment-coverage ratio shows its capacity to meet a broader set of fixed obligations (such as lease payments, principal payments on firm debt, and preferred stock dividends). For both coverage ratios, higher values are preferred, indicating the firm is better able to honor fixed obligations.

3-14 The three profitability ratios found on a common-size income statement are (1) gross profit margin, (2) operating profit margin, and (3) net profit margin. Gross margin is thepercentage of each sales dollar remaining after the cost of goods sold is covered. Operating margin ispercentage of each sales dollar remaining after deducting all firm costs/expenses except interest, taxes, and preferred stock dividends. Net profit margin deducts all firm costs and expenses. For all three ratios, higher values are preferred.

3-15 Firms with high gross profit but low net profit margins have high large expenses other than the cost of goods sold. For example, a firm with significant financial leverage will have high interest expense, which will reduce its net profit margin relative to industry competitors that use little or no debt.

3-16 Return on assets (ROA) equals earnings available to common stockholders divided by total assets; return on equity (ROE) is earnings divided by common stock equity. ROA and ROE have the same numerator but different denominators. Firms with positive earnings and debt will have ROEs above their ROAs. Only when assets are entirely financed by common stock will ROE equal ROA.

3-17 The *price-earnings ratio* (P/E) captures what investors will pay for a dollar of earnings while the *market/book* (M/B) ratio shows market perception of firm value relative to the historical cost of assets. Both ratios embody a forward-looking perspective in that their numerators reflect investor expectations about future cash flows and the riskiness of those flows. Interpreting these ratios for a specific firm is complicated by "backward-looking" denominators (i.e., earnings already posted for the P/E ratio and historical cost of assets for the M/B ratio). Another issue with P/E ratios is the tendency of earnings to plummet during recessions, which can boost the ratio to eye-popping levels.

3-18. *Liquidity* ratios measure firm capacity to meet current (short-term) financial commitments while *activity ratios* capture how rapidly a firm can convert various accounts into cash or sales. *Debt ratios* gauge a firm's dependence on creditors to finance ongoing operations and ability to service these obligations, and *profitability ratios* note a firm's return with respect to sales, assets, or equity. Finally, *market ratios* provide insight into investor perceptions of firm risk and return and risk. Creditors will be more concerned with liquidity and debt ratios as these bear on the firm's ability to meet its fixed commitments.

3-19. The analyst should use a "level, peer, trend" approach for each of the five perspectives on firm condition (liquidity, activity, debt, profitability, and market). "Level" means starting with computation of multiple ratios for each of the five perspectives and then determining whether the ratios tell a consistent story. If, for example, the current ratio is high (indicating strong liquidity), but the quick ratio low, then the firm is carrying significant inventory. The next step should be ascertaining whether that inventory can be sold with minimal losses in a cash crunch. "Peer" means comparing firm ratios with key competitors or the industry average. "Trend" means extending those comparisons over time to see longer-term patterns in each of the five areas and how these patterns compare with peer firms.

3-20 The DuPont system of analysis breaks firm return on equity (ROE) into three components: profitability (net profit margin), asset efficiency (total-asset turnover), and leverage (the debt ratio). This breakdown allows an analyst to isolate the impact of each factor on shareholder returns. For example, suppose firm A posts a significantly higher ROE than firm B. The DuPont system will highlight the "big picture" reasons for the difference. If the firms have similar profit margins and asset efficiency, but firm A has higher leverage, then its higher ROE comes with greater risk of bankruptcy (and may not be a good thing). If, however, the difference stems from firm A's higher net profit margin, then higher ROE reflects customer perception of firm A products as distinctive (and worth a significant mark-up).