**Chapter 5**

**True-False**

1. The objectives of a financial statement analysis will vary depending on the perspective of the financial statement user.

2. A creditor is ultimately concerned with the ability of a firm to generate profits.

3. Supplementary schedules, such as data related to the breakdown of key financial figures by operating segment, are helpful to financial statement analysts.

4. Form 10-Ks and Form 10-Qs can be located through the Dun & Bradstreet Information services.

5. Articles from current business periodicals should not be used in financial statement analysis as journalists are often biased.

6. Financial ratios are powerful tools due to the fact that standard definitions exist and there is a set standard that should be met for each ratio.

7. Three ratios that help the financial analyst assess short-term solvency are the current ratio, the quick ratio and the cash flow liquidity ratio.

8. The accounts receivable turnover, inventory turnover and accounts payable turnover ratios are mathematical complements to the ratios that make up the cash conversion cycle.

9. The debt ratio considers the proportion of all stockholders’ equity that is financed with debt.

10. Tools used in a financial statement analysis should generally include common-size financial statements, key financial ratios, trend analysis, structural analysis, and comparison with industry competitors.

**Fill in the Blank**

1. A statement contains useful information about the board of directors and executive compensation, option grants, audit-related matters, related party transactions and proposals to be voted on by shareholders.

2. ratios measure a firm’s ability to meet cash needs as they arise.

3. ratios measure the liquidity of specific assets and the efficiency of managing assets.

4. ratios measure the extent of a firm’s financing with debt relative to equity and its ability to cover interest and other fixed charges.

5. ratios measure returns to stockholders and the value the marketplace puts on a company’s stock.

6. The cycle or cycle is the normal operating cycle of a firm that consists of buying or manufacturing inventory, selling inventory and paying accounts payable and collecting accounts receivable.

7. The ratio is a broader measure of coverage capability than the times interest earned ratio because it includes the fixed payments associated with leasing.

8. The shows the relationship between cash dividends and market price.

9. The helps the analyst see how the firm’s decisions and activities over the course of an accounting period interact to produce an overall return to the firm’s shareholders, the return on equity.

10. financial statements are projections of financial statements based on a set of assumptions regarding future revenues, expenses, level of investments in assets, financing methods and costs, and working capital management.

**Multiple Choice**

1. Which group of people would be the most concerned about the ability of a firm to make interest and principal payments?

 a. Auditors.

 b. Customers.

 c. Creditors.

 d. Investors.

2. Which group of people would be the most concerned about the operating areas that have contributed to the success of the firm and which have not?

a. Customers.

b. Management.

c. Auditors.

d. Creditors.

3. Which ratios help assess the firm’s ability to meet cash needs as they arise?

 a. Current ratio and cash flow liquidity ratio.

 b. Average collection period and net profit margin.

 c. Debt ratio and dividend payout.

 d. Operating profit margin and return on equity.

4. Which ratios measure the extent of a firm’s financing with debt relative to equity and its ability to cover interest and fixed charges?

 a. Debt ratio and price-to-earnings ratio.

 b. Cash flow adequacy and fixed charge coverage.

 c. Days payable outstanding and gross profit margin.

 d. Cash interest coverage and average collection period.

5. How is the cash conversion cycle calculated?

 a. Average collection period + days inventory held + Days payable outstanding.

 b. Average collection period - days inventory held + Days payable outstanding.

 c.Average collection period - days inventory held - Days payable outstanding.

 d.Average collection period + days inventory held - Days payable outstanding.

6. What does a low asset turnover compared to the industry imply?

 a. The investment in assets may be too high.

 b. Sales are higher than average.

 c.The investment in assets is too low.

 d. Net income is low relative to the investment in assets.

7. All of the following are steps of a financial statement analysis except:

 a. Establish objectives of the analysis.

 b. Prepare pro forma statements.

 c. Study the industry in which the firm operates.

 d. Develop knowledge of the firm and the quality of management.

8. What does a financial leverage index greater than one indicate about a firm?

 a. Return on assets exceeds the return on equity.

b. Return on equity exceeds the return on assets.

c. The firm is not employing debt successfully.

d. The firm does not generate enough funds to cover interest payments.

9. The Du Pont System shows which of the following series of relationships?

a. Net profit margin x total asset turnover = Return on investment.

b. Net profit margin x financial leverage = Return on equity.

c. Net profit margin x total asset turnover = Return on investment and Return on investment x financial leverage = Return on equity.

d. Net profit margin x total asset turnover = Return on equity and Return on equity x financial leverage = Return on investment.

10. What is important to understand about the label “pro forma”?

 a. Pro forma refers to GAAP-based financial statements.

 b. Pro forma requires firms to present two distinct net profit amounts in their Form 10-Ks.

 c. Pro forma relates to the amount of debt in a firm’s capital structure.

 d. Pro forma earnings or financial statements are sometimes based on a firm’s own definition which is not technically a correct definition.

Use the following selected financial information for Wilcox Corporation to answer questions 11-20.

Wilcox Corporation

Income Statement

For the Year Ended December 31, 2015

Net sales $2,870

Cost of goods sold 1,985

Gross profit $ 885

Operating expenses 620

Operating profit $ 265

Interest expense 40

Earnings before taxes $ 225

Income tax expense 80

Net profit $ 145

Wilcox Corporation

Balance Sheet

December 31, 2015

Assets Liabilities and stockholders' equity

 Current assets Current liabilities

 Cash $25 Accounts payable $ 85

 Short-term investments 15 Accrued liabilities 45

 Accounts receivable 70 Total current liabilities 130

 Inventory 150 Long-term debt 240

Total current assets 260 Total liabilities 370

Long-term assets Stockholders' equity

 Net PPE 390 Common stock and PIC 80

 Goodwill 210 Retained earnings 410

 Total stockholders' equity 490

Total assets $860 Total liabilities and equity $860

WilcoxCorporation

Statement of Cash Flow Information

For the Year Ended December 31, 2015

Cash from operating activities $150

Investing activities:

 Capital expenditures $ 60

 Acquisitions $ 10

Financing activities:

 Proceeds from long-term borrowing $ 50

 Payments on long-term borrowing $ 25

 Payments of cash dividends $ 20

Cash paid for interest $ 10

Cash paid for income taxes $ 75

11. Wilcox’squick ratio is:

 a. 0.85

 b. 2.00

 c. 1.00

 d. 0.75

12. Wilcox’saverage collection period is:

 a. 5 days

 b. 9 days

 c. 13 days

 d. 15 days

13. Wilcox’sdays payable outstanding is:

 a. 7 days

 b. 11 days

 c. 16 days

 d. 22 days

14. Wilcox’stotal asset turnover ratio is:

 a. 3.98

 b. 4.22

 c. 5.91

 d. 3.34

15. Wilcox’stimes interest earned ratio is:

 a. 1.50

 b. 4.50

 c. 6.63

 d. 8.60

16. Wilcox’s cash flow adequacy ratio is:

 a. 1.43

 b. 2.15

 c. 1.90

 d. 0.54

17. Wilcox’scash flow margin is:

 a. 5.23%

 b. 5.85%

 c. 6.24%

 d. 6.67%

18. Wilcox’s effective tax rate is:

 a. 24.67%

 b. 27.36%

 c. 35.00%

 d. 35.56%

19. Wilcox’sdebt ratio is:

 a. 40.11%

 b. 43.02%

 c. 55.80%

 d. 56.32%

20. Wilcox’sreturn on equity is:

 a. 20.62%

 b. 25.50%

 c. 29.59%

 d. 28.49%

**Short Answer/Problem**

1. Explain the key items of interest to the following groups of people when completing a financial statement analysis: investors, creditors and management.

2. What other sources of information will a financial statement analyst find useful other than the financial statements and related notes?

3. List and define the five categories of ratios generally used in financial statement analysis.

4. Explain the difference between the current ratio and the cash flow liquidity ratio.

5. List and discuss the ratios that make up the calculation of the cash conversion cycle.

6. Define cash flow adequacy and the importance of this ratio to credit rating agencies.

7. The following categories of ratios are used in financial statement analysis:

 a. Liquidity

 b. Operating efficiency (also referred to as Activity)

 c. Leverage

 d. Profitability

 e. Market measures

Classify the following ratios according to the above categories:

 (1) Dividend payout

 (2) Fixed charge coverage

 (3) Cash flow margin

 (4) Days inventory held

 (5) Times interest earned

 (6) Net profit margin

 (7) Earnings per share

 (8) Fixed asset turnover

 (9) Total asset turnover

 (10) Current ratio

8. Using the ratios and information given below for PepCo Company, analyze the short-term liquidity of the firm.

 2015 2014

Current ratio .86 .80

Quick ratio .65 .61

Cash flow liquidity ratio .69 .62

Average collection period 32 days 30 days

Days inventory held 74 days 74 days

Days payable outstanding 157days 163 days

Cash conversion cycle (51 days) (59 days)

Cash flow from operations (in millions) $2,508 $2,232

Net sales (in millions) $13,957 $13,074

9. Using the ratios and information given below for SportsOutlet.com, analyze the short-term liquidity and operating efficiency of the firm.

 2015 2014

Current ratio 1.50 1.35

Quick ratio 1.15 1.08

Cash flow liquidity ratio 1.39 1.32

Average collection period 10 days 7 days

Days inventory held 35 days 28 days

Days payable outstanding 86 days 79 days

Cash conversion cycle (41 days) (44 days)

Fixed asset turnover 27.36 times 22.14 times

Total asset turnover 1.93 times 2.21 times

Cash flow from operations (in millions) $523 $376

Net sales (in millions) $6,743 $5,187

10. The following ratios have been calculated for Wholesale Appliances, Inc. Analyze the capital structure and long-term solvency of Wholesale Appliances, Inc.

 2015 2014

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| </P>Debt ratio (%) | 77.8 |  |  | 90.3 |
| Long-term debt to total capital (%) | 29.8 |  |  | 66.1 |
| Times interest earned (times) | (2.0) |  |  | (2.8) |
| Cash interest coverage (times) | 4.6 |  |  | 4.1 |
| Fixed charge coverage (times) | (0.4) |  |  | (1.0) |
| Cash flow adequacy (times) | 0.2 |  |  | 0.3 |

11.The following ratios have been calculated for the Solar Tech Company. Analyze the profitability of Solar Tech Company.

 2015 2014

Gross profit margin 37.0% 42.5%

Operating profit margin 4.7% 21.7%

Net profit margin 1.3% 17.2%

Cash flow margin 20.4% 25.9%

12. The following ratios have been calculated for Hi-Tech Toys. Analyze the capital structure, long-term solvency, and profitability of Hi-Tech Toys.

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|  |  |  |
| --- | --- | --- |
| <UNTBL><COLHD>Financial ratios | 2015 |  2014</COLHD> |
| <TB><BOLD>**Leverage**</BOLD> |  |  |
| Debt ratio (%) | 65.3 | 57.2 |
| Long-term debt to total capital (%) | 46.8 | 17.6 |
| Times interest earned (times) | (1.5) | 3.9 |
| Cash interest coverage (times) | 4.1 | 9.2 |
| Fixed charge coverage (times) | (0.4) | 2.8 |
| Cash flow adequacy (times) | 0.3 | 0.8 |
| **Profitability** |  |  |
| Gross profit margin (%) | 54.7 | 58.6 |
| Operating profit margin (%) | (2.3) | 7.4 |
| Net profit margin (%) | (3.4) | 4.7 |
| Cash flow margin (%) | 4.3 | 8.9 |
| Return on assets (%) | (3.1) | 3.2 |
| Return on equity (%) | (10.7) | (9.9) |
| Cash return on assets (%) | 3.8 | 8.4</TB></UNTBL></Q> |

13. Using the following information for Tiger Inc. calculate earnings per share, the price-to earnings ratio, dividend payout and dividend yield for the firm. Analyze these market ratios.

 2015 2014

Net income $960 million $854 million

Shares of common stock outstanding 420 million 419 million

Dividends per share $ 1.75 $ 1.60

Market price per share $56 $50

14. Financial ratio data is listed below for Gallery of Dreams. Construct a list of strengths and weaknesses for the firm after analyzing the ratios.

|  |
| --- |
| Gallery of DreamsRatios |
|  |  |  |  |  |
| Ratio | Industry | 2015 | 2014 | 2013 |
|  |  |  |  |  |
| Current | 2.50x | 4.48x | 4.06x | 3.48x |
| Quick | 0.80x | 1.47x | 1.18x | 0.96x |
| Average collection period | 11 days | 16 days | 15 days | 9 days |
| Inventory turnover | 2.30x | 1.19x | 1.24x | 1.37x |
| Days payable outstanding | 15 days | 11 days | 12 days | 8 days |
| Fixed asset turnover | 17.50x | 9.74x | 9.09x | 8.85x |
| Total asset turnover | 2.80x | 1.50x | 1.67x | 1.82x |
| Debt ratio | 62.00% | 29.47% | 34.04% | 39.17% |
| Long term debt to  total capitalization | 25.53% | 14.09% | 18.91% | 22.33% |
| Times interest earned | 9.93x | 22.02x | 19.00x | 14.23x |
| Fixed charge coverage | 8.69x | 4.59x | 4.47x | 4.25x |
| Gross profit margin | 31.10% | 59.21% | 59.39% | 58.52% |
| Operating profit margin | 8.06% | 22.05% | 21.86% | 20.52% |
| Net profit margin | 4.32% | 11.89% | 11.00% | 10.97% |
| Return on investment | 9.21% | 17.97% | 18.28% | 18.35% |
| Return on equity | 11.34% | 24.14% | 27.51% | 29.88% |

15. Using the financial ratios calculated from the 2015 annual report of PVC Pipes, assess the short-term liquidity, operating efficiency, capital structure and long-term solvency and profitability of the firm.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Ratio | 2015 | 2014 |
|  |  |  |
| Current | 1.52x | 1.48x |
| Quick | 1.01x | 0.98x |
| Average collection period | 65 days | 58 days |
| Days inventory held | 36 days | 28 days |
| Days payable outstanding | 61 days | 47 days |
| Cash conversion cycle | 40 days | 39 days |
| Fixed asset turnover | 4.91x | 4.02x |
| Total asset turnover | 1.70x | 1.43x |
| Debt ratio | 67.10% | 63.08% |
| Long Term debt to  total capitalization | 46.82% | 42.51% |
| Times interest earned | (5.10x) | 1.65x |
| Fixed charge coverage | (2.34x) | 1.40x |
| Cash flow adequacy | 0.32x | 0.87x |
| Gross profit margin | 10.10% | 12.81% |
| Operating profit margin | (5.93%) | 2.75% |
| Net profit margin | (4.98%) | 0.91% |
| Cash flow margin | 3.84% | 7.00% |
| Return on investment | (8.63%) | 1.28% |
| Return on equity | (25.49%) | 3.51% |
| Cash return on assets | 6.90% | 9.10% |