TEST BANK

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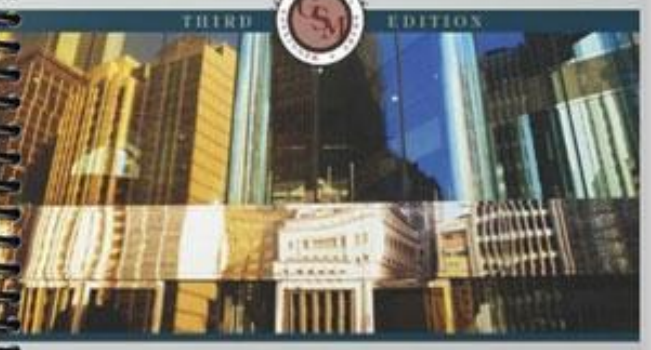
GRAHAM
SMART
MEGGINSON



THIRD EDITION

CORPORATE FINANCE

LINKING THEORY TO WHAT COMPANIES DO

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Chapter 2—Financial Statement and Cash Flow Analysis

MULTIPLE CHOICE

1. A company's balance sheet shows the value of assets, liabilities, and stockholders' equity:
   a. at the end of the fiscal year
   b. for any given period of time
   c. at a specific point in time
   d. over an annual period
   e. at the end of the calendar year

   ANS: C PTS: 1 REF: 2.1 OBJ: TYPE: fact retention

2. On a balance sheet, retained earnings are not "unspent cash" because:
   a. they have been paid out to common stockholders
   b. they have an arbitrarily assigned value
   c. they are always changing
   d. they have been used to finance the firm's assets
   e. they are an estimate of future inflows

   ANS: D PTS: 1 REF: 2.1 OBJ: TYPE: fact retention

3. For both managers and external financial analysts, _____ is the single most important accounting number found on the income statement.
   a. net income (net profit after tax)
   b. earnings before interest and taxes (EBIT)
   c. earnings available for common stockholders
   d. operating profit
   e. gross margin

   ANS: A PTS: 1 REF: 2.1 OBJ: TYPE: fact retention

4. Earnings per share (EPS) is calculated by:
   a. dividing pretax income by the number of shares of common stock outstanding
   b. dividing the dividends paid by the number of shares of common stock outstanding
   c. dividing earnings available for common stockholders by the number of shares of common stock outstanding
   d. dividing net profits after tax by the total number of preferred and common stock shares outstanding
   e. none of the above

   ANS: C PTS: 1 REF: 2.1 OBJ: TYPE: fact retention

5. Pennywise, Inc. had a great year. Sales reached an all-time high of $25 million, with a gross margin of $7.5 million. Depreciation was recorded at $800000. Earnings before interest and taxes were $3 million, interest was $1.5 million, and total taxes were $700000. The firm's operating cash flow (OCF) was:
   a. $3400000
   b. $950000
   c. $3100000
   d. $2150000
   e. $7100000

   ANS: C

OCF=EBIT- taxes + depreciation =
3 M – 0.7 M + 0.8 M = $3100000

PTS: 1 REF: 2.2 OBJ: TYPE: application of concepts

6. In May, GoGreen, Inc. increased its inventory of home composting kits, expecting sales to spike with warmer weather. This decision resulted in _____ for the firm.
   a. a decrease in depreciation expense
   b. an increase in depreciation expense
   c. an inflow of cash
   d. an outflow of cash
   e. a decrease in earnings

   ANS: D PTS: 1 REF: 2.2
   OBJ: TYPE: application of concepts

7. While examining her firm's Statement of Cash Flows, Amy discovered an unusually large increase in accounts receivable. This might occur if:
   a. the firm was holding more inventory
   b. the firm had softened its credit requirements
   c. sales had increased significantly
   d. a & b
   e. b & c

   ANS: E PTS: 1 REF: 2.2
   OBJ: TYPE: application of concepts

8. Net working capital:
   a. is a measure of a firm's overall liquidity
   b. is defined as total assets minus current liabilities
   c. reflects decreasing firm solvency as it increases
   d. all of the above
   e. none of the above

   ANS: A PTS: 1 REF: 2.2 OBJ: TYPE: fact retention

9. When evaluating financial ratios, analysts typically examine a firm's ratio values:
   a. compared to firms in other industries
   b. compared to the firm's previous years' ratios
   c. compared to regional averages
   d. compared to firms with similar net profit margins
   e. all of the above

   ANS: B PTS: 1 REF: 2.3 OBJ: TYPE: fact retention

10. Why is the quick ratio a more appropriate measure of liquidity than the current ratio for a large-airplane manufacturer?
    a. It recognizes the contribution of all assets so that analysts can see how "quickly" a firm can satisfy its short-term obligations.
    b. It recognizes that parts can be quickly converted to cash.
    c. It provides a better measure of overall liquidity when a firm has highly liquid inventory.
    d. It is not more appropriate. The current ratio would provide better information in this situation.
    e. It excludes inventory from the numerator of the ratio because it is difficult to convert inventory to cash and most sales are made on a credit basis.

ANS: E PTS: 1 REF: 2.3
OBJ: TYPE: application of concepts

11. _____ ratios would provide the best information regarding total return to common stockholders.
    a. Profitability
    b. Activity
    c. Liquidity
    d. Market
    e. Debt

    ANS: A PTS: 1 REF: 2.3 OBJ: TYPE: fact retention

12. Jane's Foods, Inc., a retail grocery chain, has an inventory turnover ratio of 18.7. The industry average is 16.8. The difference in these ratios shows that Jane's Foods, Inc.:
    a. carries larger inventories than the industry average.
    b. has lower sales than the average firm in the industry.
    c. sells its goods at a slower rate than the industry average.
    d. sells its goods more quickly than the industry average.
    e. invests more in inventory per dollar of sales than the industry average.

    ANS: D PTS: 1 REF: 2.3
    OBJ: TYPE: application of concepts

13. The one fixed asset that is not depreciated is _____.
    a. cash
    b. inventories
    c. plant
    d. land
    e. equipment

    ANS: D PTS: 1 REF: 2.1 OBJ: TYPE: fact retention

14. A _____ expresses all income statement entries as a percentage of sales.
    a. ratio income statement
    b. statement of retained earnings
    c. common-size income statement
    d. common-size balance sheet
    e. cash flow analysis

    ANS: C PTS: 1 REF: 2.1 OBJ: TYPE: fact retention
    NOT: Common-size income statements are mentioned only in a footnote.

15. Noncash charges, such as _____, are expenses that appear on the income statement but do not involve an actual outlay of cash.
    a. investment flows, operating flows, financing flows
    b. NOPAT
    c. free cash flows
    d. depreciation, amortization, and depletion allowance
    e. All of the above

    ANS: D PTS: 1 REF: 2.2 OBJ: TYPE: fact retention

16. The firm's managers use ratios to _____.
    a. generate an overall picture of the company's financial health
    b. monitor the firms' performance from period to period

c. isolate developing problems
d. monitor all aspects of the firm's financial situation
e. all of the above

ANS: E PTS: 1 REF: 2.3 OBJ: TYPE: fact retention

17. Return on total assets (ROA) is equal to _____.
a. net profit margin × total asset turnover
b. [earnings available for common stockholders / sales] × [sales / total assets]
c. earnings available for common stockholders / total assets
d. the product of the components of the DuPont System
e. all of the above

ANS: E PTS: 1 REF: 2.3
OBJ: TYPE: application of concepts

18. When a firm has no "other income," its operating profit and _____ are equal.
a. net income
b. net profit after taxes
c. EPS
d. EBIT
e. EAT

ANS: D PTS: 1 REF: 2.1 OBJ: TYPE: fact retention

19. The _____ flows result from debt and equity financing transactions.
a. financing
b. operating
c. investment
d. cash
e. free cash

ANS: A PTS: 1 REF: 2.2 OBJ: TYPE: fact retention

20. The firm's _____ are primarily interested in ratios that measure the short-term liquidity of the company and its ability to make principal and interest payments.
a. board of directors
b. creditors
c. owners
d. financial managers
e. customers

ANS: B PTS: 1 REF: 2.3 OBJ: TYPE: fact retention

21. A firm changes from LIFO to FIFO; this change will be found in the
a. The balance sheet
b. The income statement
c. The statement of cash flows
d. Notes to the financial statements

ANS: D PTS: 1 REF: 2.1 OBJ: TYPE: fact retention

22. In 2011, a firm books the following: increase in cash, $0; increase in inventories $24; increase in accounts receivable, $27; increase in accounts payable, $10; what is the firms change in net working capital?
a. $0

b. -$41
c. $41
d. $51

ANS: C

$\Delta WC = \Delta CA - \Delta CL$

$\Delta WC = 24 + 27 - 10$

PTS: 1 REF: 2.2 OBJ: TYPE: application of concepts

23. A manager has a choice of depreciation methods, 5 year straight line or 5 year MACRS; which is the most likely choice, and why?
a. MACRS to decrease taxes
b. Straight line to minimize depreciation expense
c. Straight line to match financial accounting records
d. Both choices are simply accounting choices with no real economic impact

ANS: A PTS: 1 REF: 2.2
OBJ: TYPE: application of concepts

24. Which of the following is an inflow of corporate cash?
a. Dividends
b. Increasing treasury stock
c. Purchasing treasury bills
d. Depreciation charges

ANS: D PTS: 1 REF: 2.2
OBJ: TYPE: application of concepts

MATCHING

Match each cash flow to its type:
a. Inflow
b. Outflow

1. Dividends paid
2. Decrease in any liability
3. Depreciation
4. Sale of stock
5. Repurchase of stock
6. Decrease in any asset

1. ANS: B PTS: 1 REF: 2.2
OBJ: TYPE: application of concepts
2. ANS: B PTS: 1 REF: 2.2
OBJ: TYPE: application of concepts
3. ANS: A PTS: 1 REF: 2.2
OBJ: TYPE: application of concepts
4. ANS: A PTS: 1 REF: 2.2
OBJ: TYPE: application of concepts
5. ANS: B PTS: 1 REF: 2.2
OBJ: TYPE: application of concepts

6. ANS: A PTS: 1 REF: 2.2
   OBJ: TYPE: application of concepts

Match the following ratios to the appropriate category:

a. Current
b. Assets-to-equity (A / E)
c. Earnings per share
d. Price / earnings
e. Average payment period

7. Profitability
8. Liquidity
9. Market Value
10. Activity
11. Debt

7. ANS: C PTS: 1 REF: 2.3 OBJ: TYPE: fact retention
8. ANS: A PTS: 1 REF: 2.3 OBJ: TYPE: fact retention
9. ANS: D PTS: 1 REF: 2.3 OBJ: TYPE: fact retention
10. ANS: E PTS: 1 REF: 2.3 OBJ: TYPE: fact retention
11. ANS: B PTS: 1 REF: 2.3 OBJ: TYPE: fact retention

Match the following terms to their definitions with their proper agency and rules:

a. accepted accounting rules
b. developed accepted accounting rules
c. responsible for regulating publicly held U.S. companies
d. accounting standards followed by most developed countries

12. FASB
13. SEC
14. GAAP
15. IAS

12. ANS: B PTS: 1 REF: 2.1
    OBJ: TYPE: application of concepts
13. ANS: C PTS: 1 REF: 2.1
    OBJ: TYPE: application of concepts
14. ANS: A PTS: 1 REF: 2.1
    OBJ: TYPE: application of concepts
15. ANS: D PTS: 1 REF: 2.1
    OBJ: TYPE: application of concepts

Match the following terms to their definitions:

a. cash
b. marketable securities
c. accounts receivable
d. gross property
e. net property

16. liquid, short-term investment
17. original cost of an asset
18. asset that can be used directly as a means of payment
19. original cost of an asset minus accumulated depreciation

20. amount customers owe the firm from sales made on credit

16. ANS: B PTS: 1 REF: 2.1
OBJ: TYPE: fact retention | TYPE: application of concepts
17. ANS: D PTS: 1 REF: 2.1
OBJ: TYPE: fact retention | TYPE: application of concepts
18. ANS: A PTS: 1 REF: 2.1
OBJ: TYPE: fact retention | TYPE: application of concepts
19. ANS: E PTS: 1 REF: 2.1
OBJ: TYPE: fact retention | TYPE: application of concepts
20. ANS: C PTS: 1 REF: 2.1
OBJ: TYPE: fact retention | TYPE: application of concepts

Match the following flows to their definitions:

a. operating flows
b. investment flows
c. financing flows
d. free cash flow
e. non-cash charges

21. associated with the purchase or sale of fixed assets and business interests
22. result from debt and equity financing
23. cash flow available to investors
24. expenses that appear on the income statement but do not involve an actual outlay of cash
25. directly related to the production and sale of the firm's products or services

21. ANS: B PTS: 1 REF: 2.2
OBJ: TYPE: fact retention | TYPE: application of concepts
22. ANS: C PTS: 1 REF: 2.2
OBJ: TYPE: fact retention | TYPE: application of concepts
23. ANS: D PTS: 1 REF: 2.2
OBJ: TYPE: fact retention | TYPE: application of concepts
24. ANS: E PTS: 1 REF: 2.2
OBJ: TYPE: fact retention | TYPE: application of concepts
25. ANS: A PTS: 1 REF: 2.2
OBJ: TYPE: fact retention | TYPE: application of concepts

Match the following account changes with cash inflows and outflows:

a. inflows
b. outflows

26. decrease in inventory
27. increase in accounts receivable
28. depreciation
29. repurchase of common stock
30. dividend paid

26. ANS: A PTS: 1 REF: 2.2
OBJ: TYPE: application of concepts
27. ANS: B PTS: 1 REF: 2.2
OBJ: TYPE: application of concepts
28. ANS: A PTS: 1 REF: 2.2
OBJ: TYPE: application of concepts

29. ANS: B PTS: 1 REF: 2.2
OBJ: TYPE: application of concepts
30. ANS: B PTS: 1 REF: 2.2
OBJ: TYPE: application of concepts

SHORT ANSWER

1. Consider a firm with a current ratio of 1.2, a quick ratio of 0.9, and an inventory turnover ratio of 12.7. If the firm has inventories of $1.2 million, what are their current assets and cost of goods sold?

   ANS:
   Given the firm has an inventory turnover ratio of 12.7, and inventories of 1.2 million, the firm's cost of goods sold must be $15.24 million. The firm's current ratio is 1.2, so current liabilities may be written as current assets / 1.2. Substituting this relationship into the quick ratio formula produces,

   0.9 = (current assets - inventory) / current liabilities
   = (current assets - inventory) / (current assets / 1.2)
   = 1.2 (current assets – $1.2 M) / (current assets)

   Solving for current assets yields

   0.9 = 1.2 – $1.44 M / (current assets)
   0.3 = $1.44 M / (current assets)

   therefore current assets = $1.44 M / 0.3 = $4.8 M

   Similarly, cost of goods sold can be computed directly from the inventory turnover ratio as 12.7 × $1.2M = $15.24M

   PTS: 1 REF: 2.3 OBJ: TYPE: advanced critical thinking

2. The DuPont System allows us to relate the return on total assets and the return on common equity to various measures of firm characteristics. Consider a firm with a ROA of 0.04.
   a. If you were analyzing a firm that had sales of $12500 and total assets of $10000, how much in earnings were available for common shareholders?
   b. If the firm had common stockholders' equity of $3300, what would be the firm's ROE?
   c. If we compare this firm to another similar firm in the industry we find that the comparison firm has an ROA and ROE of 0.05 and 0.191663, respectively. Given this information, calculate the comparison firm's ratio of total assets to common stock equity. How does this ratio differ from our firm?
   d. Interpret the performance differences between these firms.

   ANS:
   a. earnings available for common shareholders = 0.04 × $10000 = $400
   b. ROE = $400 / $3300 = 0.1212 or 12.12%
   c. ROE = ROA × A / E
      0.191663 = 0.05 × A / E therefore, A / E = 3.83326 (virtually the same as for our firm, i.e. $10000 / $3300 = 3.0303)
   d. The performance differences between these firms are therefore due to the differing abilities of the two firms to earn returns on their assets The first firm earned only 4 cents on each dollar of assets whereas the comparison firm earned 5 cents on each dollar of assets, thereby accounting for its greater return on common stockholder equity.

PTS: 1 REF: 2.3 OBJ: TYPE: application of concepts

3. Consider a firm with an ROA of 0.04 and ROE of 0.13. A comparison firm from the same industry has an ROA of 0.06 and an ROE of 0.191667. Both firms have the same degree of financial leverage as reflected in their identical assets-to-equity ratios of 3.194445. Suppose we were to learn that our comparison firm is 70 years old. Our firm is relatively young. Taking into account this new information, interpret the performance differences between these firms.

   ANS:
   The performance differences between these firms are therefore due to the ability of the firms to productively employ their assets. However, older firms tend to have smaller book values of assets, which tend to lead to overstated measures of ROA. That is, the smaller ROA denominator may only reflect accounting differences between the firms. If this is the case here, there may be no real performance differences between the firms. The differences might solely be due to a bias in our 'historical cost less accumulated depreciation' accounting system.

   PTS: 1 REF: 2.3 OBJ: TYPE: advanced critical thinking

4. Given the balance sheets provided for Local Oil Co (2003 and 2004) below, calculate the following ratios for both 2003 and 2004:
   a. Current ratio
   b. Quick ratio
   c. Debt ratio
   d. Assets-to-equity
   e. Debt-to-equity

   Local Oil Co. Balance Sheet 2003 and 2004 ($ in millions)

Assets	**2004**	**2003**
Current Assets		
Cash and cash equivalents	$ 220	$ 200
Marketable securities	50	40
Accounts receivable	1,750	1,550
Inventories	650	670
Other	150	160
Total current assets	$2820	$2620
Fixed assets		
Gross property, plant, and equipment	$9,550	$9,025
Less: Accumulated Depreciation	(3,450)	(3,250)
Net property, plant, and equipment	$6,100	$5,775
Intangible assets and others	750	575
Net fixed assets	$6,850	$6,350
Total assets	**$9670**	**$8970**
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	$1700	$1600
Notes payable	350	600
Accrued expenses	300	300
Total current liabilities	$2350	$2500
Long term liabilities		
Deferred taxes	$ 950	$ 900

Long-term debt	2,000	1,800
Total long-term liabilities	$2950	$2700
Total Liabilities	$5300	$5200
Stockholders' equity		
Preferred stock	$ 240	$ 240
Common stock par value	240	220
Paid-in capital in excess of par	1250	1075
Retained earnings	840	215
Less: Treasury stock	(550)	(480)
Total stockholders' equity	$2020	$1270
Total liabilities and stockholders' equity	**$9670**	**$8970**

ANS:

	2004	2003
a. Current ratio =	1.2000	1.0480
b. Quick ratio =	0.9234	0.7800
c. Debt ratio =	0.5481	0.5797
d. Assets-to-equity =	4.7871	7.0630
e. Debt-to-equity =	1.4604	2.1260

PTS: 1 REF: 2.3 OBJ: TYPE: application of concepts

5. If one of the entries on the asset side of the balance sheet is measured with error, what must happen to the other side of the balance sheet? Do we expect items near the top of the balance sheet to be more or less subject to measurement errors?

   ANS:
   If one of the entries on the asset side of the balance sheet is measured with error, there must be on offsetting value on the other side of the balance sheet. In general, measurement errors are greatest for items that are less marketable and exist for longer periods of time. These entries will be reported in the lower portion of the balance sheet.

   PTS: 1 REF: 2.1 OBJ: TYPE: application of concepts

6. Consider a firm that shows an increase in liquidity according to the current ratio, but a decrease in liquidity according to the quick ratio for some interval of time. How would you decide if liquidity has improved or deteriorated?

   ANS:
   The difference in the ratios relates entirely to inventory levels. It is possible for this situation to occur. For instance, consider a firm with a large increase in inventories and a small increase in current liabilities. To decide if this represents a positive or negative liquidity event, we need to interpret the role of inventories. If inventories may be readily sold to others in the case of a cash shortage, then the current ratio reflects the correct state of affairs. If, in contrast, inventories could not be sold in the case of a serious negative event, then the quick ratio should be followed. A lot of the activity of inventory using the inventory turnover ratio would show the general liquidity of inventory. High inventory turnovers would validate the current ratio whereas low inventory turnover would support use of the quick ratio.

   PTS: 1 REF: 2.3
   OBJ: TYPE: application of concepts | TYPE: critical thinking

7. Identify the four key financial statements required by the SEC for reporting to stockholders.

ANS:
1. balance sheet
2. income statement
3. statement of retained earnings
4. statement of cash flows

PTS: 1 REF: 2.1 OBJ: TYPE: application of concepts

8.

a. Calculate the net profit margin, total asset turnover, assets-to-equity ratio, and ROE using the data in the following table for firms in the same industry.

	Sales	Earnings available for common stockholders	Total assets	Stockholder's equity
Axel Co.	$260000	49400	170000	$50000
Blue Co.	150000	9000	80000	50000
Carol Co	100000	10000	100000	94000
David Co.	300000	12000	270000	150000

b. Evaluate each firm's performance relative to the other three firms in the industry.

ANS:
a.

	Net profit margin	Total asset turnover	Assets-to-Equity Ratio	ROE
Axel Co.	19%	1.53	3.4	98.8%
Blue Co	6%	1.88	1.6	18.0%
Carol Co.	10%	1.00	1.06	10.6%
David Co.	4%	1.11	1.8	8.0%

b. Axel Co. appears to have the best financials
- Blue Co. has a low net profit margin indicating the need for lower costs or higher prices.
- Carol Co. has both a low total assets turnover and a low assets-to-equity ratio. The low turnover indicates excessive investment in assets. The low assets-to-equity ratio indicates that the firm is not taking advantage of financial leverage (debt).
- David Co. has a lower net profit margin and total asset turnover, but makes up for these weaknesses by using more financial leverage which is reflected in its high assets-to-equity ratio, i.e., high risk.

PTS: 1 REF: 2.3
OBJ: TYPE: application of concepts | TYPE: critical thinking

9. The following financial data is given for four firms:

	Net profit margin	Total asset turnover	Assets-to-Equity Ratio	ROE
Axel Co.	15%	1.33	1.50	30.0%
Blue Co	5%	1.33	1.50	10.0%
Carol Co.	15%	1.00	1.07	16.0%
David Co.	12%	1.04	2.40	30.0%

What additional information would you require to complete your analysis of the companies presented here?

ANS:
Knowing the makeup of the current and fixed assets, along with a separate breakout of current liabilities would provide insight into the company's liquidity. In addition, it would be helpful to know the method used by the company to report its financial information.

PTS: 1 REF: 2.3 OBJ: TYPE: critical thinking

10. What determines the order in which assets and liabilities appear within their respective balance sheet sections?

ANS:
Assets and liabilities appear in descending order of liquidity, or the length of time it will take for the accounts to be converted into cash in the normal course of business.

PTS: 1 REF: 2.1 OBJ: TYPE: critical thinking

11. What is the final step in the income statement?

ANS:
The final step is to subtract taxes from pretax income to arrive at net income, or net profit after tax. Net income is the "bottom line" and is the single most important accounting number for both corporate managers and external financial analysis. Subtracting any preferred dividends from net income results in earnings available for common stockholders, which when divided by the number of shares of common stock outstanding results in earnings per share (EPS).

PTS: 1 REF: 2.1 OBJ: TYPE: critical thinking

12. What is the purpose of the statement of retained earnings?

ANS:
The statement of retained earning reconciles the net income earned during a given year, and any cash dividend paid, with the change in retained earnings between the start and end of that year.

PTS: 1 REF: 2.1 OBJ: TYPE: critical thinking

13. Why do financial managers tend to be more interested in free cash flow (FCF) than in the net operating profit after taxes?

ANS:
FCF is the amount of cash flow available to investors--the providers of debt and equity. It represents the net amount of cash flow remaining after the firm has met all operating needs and paid for investments--both short-term and long-term.

Net operating profit after taxes, on the other hand, is a rough accounting estimate of the internal cash flow generated by the firm in a given period.

PTS: 1 REF: 2.2 OBJ: TYPE: critical thinking

14. What is financial leverage?

ANS:
Financial leverage is the magnification of risk and expected return introduced through the use of fixed--cost financing, such as debt and preferred stock. The more financial leverage a firm uses, the greater will be its risk and the higher the return investors will demand on the firm's securities.

PTS: 1 REF: 2.3 OBJ: TYPE: critical thinking

Rich Corporation's Financial Statements

Rich Corporation Balance Sheets ($000)

Assets	**2004**	**2003**
Current assets		
Cash	$ 350.00	$ 200.00
Marketable securities	$ 10.00	$ 5.00
Accounts receivable	$1,450.00	$ 925.00
Inventory	$ 450.00	$ 300.00
Other	$ 65.00	$ 80.00
Total current assets	$2325.00	$1,510.00
Fixed Assets		
Gross Property, plant, and equipment	$ 7,900.00	$ 7,000.00
Less: accumulated depreciation	$(2,725.00)	$(2,225.00)
Net property, plant, and equipment	$ 5,175.00	$ 4,775.00
Intangible assets	$ 250.00	$ 150.00
Net fixed assets	$ 5325.00	$ 4,925.00
Total Assets	**$ 7650.00**	**$ 6,435.00**
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	$ 900.00	$ 550.00
Notes payable	$ 700.00	$ 550.00
Accrued expenses	$ 390.00	$ 225.00
Total current liabilities	$ 1990.00	$1,325.00
Long-term liabilities		
Deferred taxes	$ 650.00	$ 425.00
Long-term debt	$1004.00	$ 950.00
Total long-term liabilities	$1654.00	$1,375.00
Total liabilities	$3644.00	$2,700.00
Stockholders' equity		
Preferred stock	$ 10.00	$ 20.00
Common stock ($1 par value)*	$ 670.00	$ 652.00
Paid-in capital in excess of par	$ 585.00	$ 575.00
Retained earnings	$3,113.00	$2,688.00
Less: treasury stock	$ (400.00)	$ (200.00)
Total stockholders' equity	$2016.00	$3,735.00
Total liabilities and stockholders' equity	**$7650.00**	**$6,435.00**

* 665,000 shares of common stock outstanding in 2004 and 652,000 shares of common stock outstanding in 2003

Rich Corporation Income Statements ($000)

	2004	2003
Sales revenue	$10250.00	$8,350.00
Less: Cost of goods sold (COGS)*	$ 7754.00	$5,177.00
Gross profit	$ 2496.00	$3,173.00
Less: Operating expenses	$ 600.00	$1,420.00
Less: Selling, general, & administrative expenses	$ 555.00	$ 530.00
Less: Depreciation	$ 500.00	$ 475.00
Operating profit	$ 841.00	$ 748.00
Plus: Other income	$ 120.00	$ 90.00
EBIT	$ 961.00	$ 838.00
Less: Interest expense	$ 140.00	$ 125.00
Pretax income	$ 821.00	$ 713.00
Less: Taxes		
Current	$ 325.00	$ 178.00
Deferred	$ 180.00	$ 90.00
Total taxes	$ 505.00	$ 268.00
Net income after tax	$ 795.00	$ 445.00
Less: Preferred stock dividends	$ 5	$ 3.00
Earnings available for common stockholders	$ 790.00	$ 442.00
Less: Dividends	$ 365.00	$ 190.00
Total retained earnings**	$ 425.00	$ 252.00

* Rich's annual credit purchases represent about 75% of COGS. Using this relationship, its credit purchases in 2004 were $5815500 and in 2003 were $3,882,750.
** The price per share of stock at the end of 2004 was $14.30 and in 2003 it was $6.10.

15. Refer to Rich Corporation's Financial Statements. Calculate the liquidity ratios for Rich Corporation in 2004.

ANS:

$$\text{Current ratio} = \frac{\text{current assets}}{\text{current liabilities}} = \frac{\$2325}{\$1990} = 1.17$$

$$\text{Quick ratio} = \frac{\text{current assets - inventory}}{\text{current liabilities}} = \frac{\$2325 - \$450}{\$1990} = 0.94$$

PTS: 1 REF: 2.3 OBJ: TYPE: application of concepts

16. Refer to Rich Corporation's Financial Statements. Calculate the activity ratios for Rich Corporation in 2004.

ANS:

$$\text{Inventory turnover} = \frac{\text{COGS}}{\text{inventory}} = \frac{\$7754}{\$450} = 17.23$$

$$\text{Average sales per day} = \frac{\text{annual sales}}{365} = \frac{\$10,250,000.00}{365} = \$28082$$

$$\text{Average collection period} = \frac{\text{accounts receivable}}{\text{average sales per day}} = \frac{\$1450000}{\$28082} = 51.6 \text{ days}$$

Average purchases per day = $\frac{\text{annual purchases}}{365} = \frac{\$5815500}{365} = \$15933$

Average payment period = $\frac{\text{accounts payable}}{\text{avg. purch. per day}} = \frac{\$900{,}000}{\$15933} = 56.5 \text{ days}$

Net fixed asset turnover = $\frac{\text{sales}}{\text{net fixed assets}} = \frac{\$10250}{\$5325} = 1.92$

Total asset turnover = $\frac{\text{sales}}{\text{total assets}} = \frac{\$10250}{\$7650} = 1.34$

PTS: 1 REF: 2.3 OBJ: TYPE: application of concepts

17. Refer to Rich Corporation's Financial Statements. Calculate the debt ratios for the Rich Corporation in 2004.

ANS:

Debt ratio = $\frac{\text{total liabilities}}{\text{total assets}} = \frac{\$3644}{\$7650} = 47.6\%$

Assets-to-equity = $\frac{\text{total assets}}{\text{common stock equity}} = \frac{\$7650}{\$2016 - \$10} = 3.81$

Debt-to-equity = $\frac{\text{long-term debt}}{\text{stockholders' equity}} = \frac{\$1004}{\$2016} = 49.8\%$

Times interest earned = $\frac{\text{EBIT}}{\text{interest expense}} = \frac{\$961}{\$140} = 6.86$

PTS: 1 REF: 2.3 OBJ: TYPE: application of concepts

18. Refer to Rich Corporation's Financial Statements. Calculate the profitability ratios for Rich Corporation in 2004.

ANS:

Gross profit margin = $\frac{\text{gross profit}}{\text{sales}} = \frac{\$2496}{\$10250} = 24.4\%$

Operating profit margin = $\frac{\text{operating profit}}{\text{sales}} = \frac{\$841}{\$10250} = 8.2\%$

Net profit margin = $\frac{\text{earnings available for common stockholders}}{\text{sales}} = \frac{\$790}{\$10250} = 7.7\%$

EPS = $\frac{\text{earnings available for common stockholders}}{\text{number of shares of common stock outstanding}} = \frac{\$790}{665} = \$1.19$

ROA = $\frac{\text{earnings available for common stockholders}}{\text{total assets}} = \frac{\$790}{\$7650} = 10.3\%$

ROE = $\frac{\text{earnings available for common stockholders}}{\text{common stock equity}} = \frac{\$790}{\$2016 - \$10} = 39.4\%$

PTS: 1 REF: 2.3 OBJ: TYPE: application of concepts

19. Refer to Rich Corporation's Financial Statements. Calculate the market ratios for the Rich Corporation in 2004 assuming the firm's earnings per share (EPS) are $1.19.

ANS:

$$\text{P/E ratio} = \frac{\text{market price per share of common stock}}{\text{earnings per share}} = \frac{\$14.30}{\$1.19} = 12.04$$

$$\text{Book value per share} = \frac{\text{common stock equity}}{\text{number of shares of common stock outstanding}} = \frac{\$670.00}{665} = \$1.01$$

$$\text{Market/book ratio} = \frac{\text{market value per share of common stock}}{\text{book value per share of common stock}} = \frac{\$14.30}{\$1.01} = 14.16$$

PTS: 1 REF: 2.3 OBJ: TYPE: application of concepts

20. Refer to Rich Corporation's Financial Statements. Calculate the ROA and ROE ratios using the DuPont system for Rich Corporation in 2004.

ANS:

ROA = net profit margin × total asset turnover

$$\text{ROA} = \frac{\text{earnings available for common stockholders}}{\text{sales}} \times \frac{\text{sales}}{\text{total assets}}$$

$$= \frac{\$790}{\$10250} \times \frac{\$10250}{\$7650}$$

$$= 7.7\% \times 1.34$$

$$= 10.3\%$$

ROE = (net profit margin × total asset turnover) × assets-to-equity ratio

ROE = ROA × assets-to-equity ratio

$$\text{ROE} = \text{ROA} \times \frac{\text{total assets}}{\text{common stock equity}}$$

$$= 10.3\% \times \frac{\$7650.00}{\$670.00} = 117.6\%$$

PTS: 1 REF: 2.3
OBJ: TYPE: application of concepts | TYPE: critical thinking

ESSAY

1. In a well-written essay, discuss the types of financial information sought by at least three different potential users of financial statements. What difficulties arise when creating a set of accounting statements for multiple users? Do you believe that there is a single set of accounting rules that, once found, will solve all reporting controversies?

   ANS:
   A well-written essay will consider potential users of financial statements such as external financial analysts seeking timely information for investment purposes, legal analysts seeking a detailed accounting history of the firm's operations and performance, internal users seeking consistent measurement of past events for management decisions and compensation contracts, and managers seeking information related to comparison firms in the same industry.

   Unfortunately, it is extremely difficult for a single set of financial statements to provide 'best' information for a wide list of alternative purposes. Perhaps the best we can seek is a set of financial statements that are consistent over time and across firms. This data bank of information can then be used meaningfully and modified for a variety of purposes.

   Because of the varied viewpoints and concerns of users of financial information, it is unlikely that a single set of accounting rules will solve all reporting controversies. As long as the rules allow firms some flexibility with regard to the reporting of various transactions there will be controversies. The goal should be the minimization of potential controversies.

   PTS: 1 REF: 2.1 OBJ: TYPE: advanced critical thinking

2. Given the appropriate financial statements, what is required to do a complete ratio analysis and interpretation of the ratio for a given corporation? What other analyses might you do?

   ANS:

Ratio	**Information required**
Current ratio	Current assets Current liabilities
Quick ratio	Current assets inventory Current liabilities
Activity ratios: Inventory turnover Average sales per day Average collection period Average purchases per day Average payment period Fixed asset turnover Total asset turnover	COGS Inventory Annual sales Accounts receivable Annual purchase Accounts payable Net fixed assets Total assets
Debt Ratios: Assets-to-equity Debt-to-equity Times interest earned	Total liabilities Total assets Common stock equity Long-term-debt Stockholders' equity EBIT Interest expense
Profitability ratios: Gross profit margin Operating profit margin Net profit margin	Gross profit Sales Operating profit Earnings available for common stockholders

EPS	Number of shares of common stock outstanding
ROA	Total assets
ROE	Common stock equity
Market ratios:	Market price per share of common stock
P/E ratio	Earnings per share
Book value per share	Common stock equity
Market/book ratio	Number of common stock shares outstanding

Other analyses that might be done:

1. Do a trend analysis of the ratios over multiple years. Discuss the upward or downward trend of each ratio.
2. Make a comparison of each ratio in each year to the appropriate industry average.
3. Compare the DuPont system for ROA and ROE over multiple years to the industry ratios.
4. Draw conclusions on the corporation's liquidity, activity, debt, profitability, and market ratios.
5. You could also analyze the statement of retained earning and the statement of cash flows.

PTS: 1 REF: 2.2 | 2.3 OBJ: TYPE: critical thinking

3. How do you calculate a firm's free cash flow (FCF)?

ANS:
First you calculate the firm's operating cash flow (OCF), the cash flow generated from operations.

$$OCF = NOPAT + depreciation = EBIT * (1- T) + depreciation$$

Second, you convert OCF to free cash flow (FCF). This is done by deducting the firm's net investment in fixed (ΔFA) and current assets (ΔCA) from OCF.

Only spontaneous current liability changes--changes in accounts payable ($\Delta A / P$) and changes in accrued liabilities (Δ accruals)--are deducted from current assets to find the net change in short-term investment.

$$FCF = OCF - \Delta FA - (\Delta CA - \Delta A / P - \Delta \text{ accruals})$$

PTS: 1 REF: 2.2 OBJ: TYPE: critical thinking

4. What are the basic steps in constructing a statement of cash flows?

ANS:
You construct the statement of cash flows by using the income statement for a given year, along with the beginning and end-of-year balance sheets. The procedure involves classifying balance sheet changes as inflows or outflows of cash; obtaining income statement data; classifying the relevant values into operating, investment, and financing cash flows; and presenting them in the proper format.

By adding up the items in each category--operating, investment, and financing activities--you obtain the net increase (decrease) in cash and marketable securities for the year.

PTS: 1 REF: 2.2 OBJ: TYPE: critical thinking