

CHAPTER TWO

FINANCIAL STATEMENT ANALYSIS & CALCULATION OF FINANCIAL RATIOS

“Patience is the best remedy for every trouble.”
Plantus, Titus Maccius (c. 254- 184 B.C.)

“Be not afraid of going slowly; be only afraid of standing still.”
Chinese Proverb

Observation

Financial statement analysis is one of the most important steps in gaining an understanding of the historical, current and potential profitability of a company. Financial analysis is also critical in evaluating the relative stability of revenues and earnings, the levels of operating and financial risk, and the performance of management.

Common size financial statements are an important tool in financial statement analysis. This Chapter explains the calculation and interpretation of common size balance sheets as well as common size income statements.

This Chapter also defines a wide variety of ratios derived from financial statement information. The ability to calculate, compare and interpret these financial ratios is a key learning objective of this chapter.

I. FINANCIAL RATIO (TREND) ANALYSIS SUMMARY

In general, a thorough financial analysis of any business would include a study of the following financial information:

1. A summary of both the historical and the adjusted economic/normalized balance sheets over the period being analyzed, detailing each balance sheet line item.¹
2. A summary of both the historical and the economic/normalized adjusted income statements over the period being analyzed, detailing each income statement line item.
3. A summary of both the historical and the economic/normalized adjusted income statements over the period being analyzed, where each income statement line item is reported as a percentage of net sales (often referred to as a common-size income statement).
4. A summary of both the historical and the economic/normalized adjusted balance sheets for the period being analyzed, where each balance sheet line item is reported as a percentage of total assets (often referred to as a common-size balance sheet).
5. A summary of both the historical and the economic/normalized adjusted cash flows from operating activities (on the basis of operations and adjusted for owner/manager discretionary items such as compensation and perquisites) over the period being analyzed.

¹Economic or normalized financial statements have been adjusted to better reflect the economic reality underlying measures of assets, liabilities, revenues, expenses, etc. Preparation of normalized financial statements is covered in detail in Chapter 3.

6. A summary of the five main categories of selected financial ratios over the period being analyzed are:
 - a. Internal liquidity ratios
 - b. Operating efficiency ratios
 - c. Operating profitability ratios
 - d. Business risk (operating) analysis ratios
 - e. Financial risk (leverage) analysis ratios
7. The valuation analyst should then compare the aforementioned ratios for the subject company to those for other specific businesses or to an appropriate industry average.

II. COMMON-SIZE ANALYSIS

The conversion of balance sheet and income statement line items to percentages of a total is often referred to as placing the statements on a “common-size” basis. For purposes of common-size statements, balance sheet line items are presented as a percentage of total assets and income statement line items are presented as a percentage of total net sales or gross revenue.

Converting the subject company’s balance sheets and income statements to a common-size basis assists the analyst by identifying internal trends. Common-size statements also facilitate comparison with other companies in the same industry. A comparison with the data of one or more other companies if done on the basis of absolute dollar amounts would be very confusing and time consuming without common-size analysis. Further, comparisons with industry averages are facilitated and made more efficient by using common-size analysis.

Because common-size financial statement analysis is based on relative size, it removes the confusion that prevails when exact dollar amounts are used. It is also a fundamental step in developing ratio (trend) and comparative analyses.

III. RATIO (TREND) ANALYSIS

A. OVERVIEW

Financial ratios are measures of the relative health, or sometimes the relative sickness of a business. A physician, when evaluating a person’s health, will measure the heart rate, blood pressure and temperature; whereas, a financial analyst will take readings on a company’s growth, cost control, turnover, profitability and risk. Like the physician, the financial analyst will then compare these readings with generally accepted guidelines. Ratio analysis is an effective tool to assist the analyst in answering some basic questions, such as:

1. How well is the company doing?
2. What are its strengths and weaknesses?
3. What are the relative business and operating risks to the company?

Please note that although an analysis of financial ratios will help identify a company’s strengths and weaknesses, it has its limitations and will not necessarily identify all strengths and weaknesses, nor will it provide the solutions or cures for the problems it identifies. For instance, off balance sheet financing techniques are not included or reflected in the balance sheet. Typical off- balance sheet items include:

1. The use of operating leases (vis-à-vis- capitalized lease)
2. Use of finance affiliates
3. Sales or factoring of receivables
4. Use of securitization
5. Take-or-pay and throughput contracts
6. Use of joint ventures
7. Guaranteeing the debt of affiliates

In addition, historical financial data has limitations since the subject firm can:

1. Record questionable revenue
2. Record revenue too soon
3. Record sham revenue
4. Record one-time gains to boost income
5. Shift expenses either to an earlier or later period
6. Under-report or improperly reduce liabilities
7. Shift revenues to the future
8. Take current charges to shift future expenses

To make the most effective use of financial ratios, the ratios should be calculated and compared over a period of several years. This allows the valuation analyst to identify trends in these measurements over time. These ratios can also be compared to specific other companies or to industry averages or norms in order to see how the subject company is performing relative to other businesses in its industry during the same period of time.

Once the analyst has obtained the GAAP basis and/or tax basis balance sheets and income statements and has prepared a summary of the historical economic/normalized balance sheets and income statements, then an analysis of the key financial statement ratios can be undertaken.

B. APPLICATION OF RATIO ANALYSIS

1. An Analysis of Financial Ratios is a Useful Tool for Business Valuations

a) Integral tool in trend analysis

- (1) Compares the company's own ratios to itself over time
- (2) Identifies the company's strengths and weaknesses
- (3) Assists in establishing appropriate capitalization rates (helps to identify risk factors particular to the subject company) (See Chapter Five)

b) Integral tool in comparative analysis

- (1) Assists in making comparisons with other companies' or industry averages
- (2) Assists in selecting appropriate price/earnings ratios or price/asset multiples relative to the company's indicated performance to compare to comparable companies or industry averages

2. Uses Historical Data

- a) Preferably for five years or alternatively, the length of the natural business cycle of the subject company and industry
- b) More than five years when the analyst deems appropriate
- c) Less than five years when the analyst uncovers unavailability of information, unusual fluctuations or a specific valuation purpose

3. Steps in Trend Analysis

- a) Obtain and analyze GAAP basis or tax basis financial data
- b) List and prepare summaries by year for key financial statement accounts (both balance sheet and income statement items)
- c) Select, compute and compare the relevant financial ratios for each year
- d) Analyze and develop conclusions. This analysis will highlight questionable or unusual items to be discussed with management for clarification or potential adjustment

4. Observation

The most effective way to compare and analyze several years of financial data is to prepare a spreadsheet, either standalone or by using a valuation software program that lists the description of the financial data and the respective years. The majority of software programs list the descriptions vertically and the years (or other timing) horizontally, allowing easy side-by-side comparisons of financial information.

IV. KEY FINANCIAL RATIOS

The thorough valuation analyst will consider and compute five categories of ratios:

1. Internal liquidity ratios
2. Operating efficiency ratios
3. Operating profitability ratios
4. Business risk (operating) analysis ratios
5. Financial risk (leverage) analysis ratios

The following section provides a summary of the five categories of financial ratios, along with descriptions of how each ratio is calculated and its relevance to financial analysis. Remember, the ratios themselves may not be entirely meaningful unless used in trend analysis or comparative analysis.

A. INTERNAL LIQUIDITY RATIOS

The internal liquidity ratios (also referred to as solvency ratios) measure a firm's ability to pay its near-term financial obligations.

1. Current Ratio

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

This ratio provides a good measure of solvency if accounts receivable and inventories are liquid.

2. Quick Ratio

$$\text{Quick Ratio} = \frac{\text{Cash} + \text{Marketable Securities} + \text{Receivables}}{\text{Current Liabilities}}$$

If inventories are not easily liquidated, the quick ratio provides a better indicator of the firm's financial solvency vis-à-vis the current ratio.

3. Cash Ratio

$$\text{Cash Ratio} = \frac{\text{Cash} + \text{Marketable Securities}}{\text{Current Liabilities}}$$

The cash ratio is the most conservative measure of solvency; it is used if neither accounts receivables nor inventories are liquid

4. Receivable Turnover

$$\text{Receivable Turnover} = \frac{\text{Net Sales}}{((\text{Beginning A/R} + \text{Ending A/R}) \div 2)}$$

This calculation finds the ratio between the net sales for the period and the average balance in accounts receivable. The resulting ratio is a measure of how many times accounts receivable are collected (or turned over) during the period being examined. For example, a ratio of 6 indicates that accounts receivable, on average, were completely collected 6 times over the past year, or every two months.

The analyst can further convert the turnover ratio by dividing it into 365. This yields a rough indication of the average time required to convert receivables into cash. Ideally, a monthly average of receivables should be used and only sales on credit should be included in the sales figure. The interpretation of the average age of receivables depends upon a company's credit terms and the seasonable activity immediately before year-end. If a company grants 30 days credit terms to its customers, for example, and a turnover analysis indicates average collection time of 41 days, then accounts receivable collections are lagging. If the terms were for 60 days, however, it appears collections are being made ahead of schedule. Note, if the sales volume in the last month of the year is unusually large, the average age of receivables as computed above can be misleading.

5. Inventory Turnover

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{((\text{Beginning Inventory} + \text{Ending Inventory}) \div 2)}$$

This ratio measures the number of times a company sells (or turns) its inventory during the year. The relationship between inventory turnover and the gross profit rate may be important. A high inventory turnover and a low gross profit rate frequently go hand in

hand. This, however, is merely another way of saying if the gross profit rate is low a higher volume of business is necessary to produce a satisfactory return on total assets. Although, a high inventory turnover is usually regarded as a good sign, a rate that is high in relation to that of similar firms may indicate the company is losing sales by failing to maintain an adequate stock of goods to serve its customers promptly.

High inventory turnover can also indicate better liquidity or superior merchandising. Conversely, it can indicate a shortage of needed inventory for sales. Low inventory turnover can indicate poor liquidity, possible overstocking or obsolete inventory. In contrast to these negative interpretations, however, a planned inventory buildup may be occurring to avoid material shortages.

As with the accounts receivable turnover ratio, the inventory turnover ratio can be divided into 365 to estimate the average number of days required to completely sell the company's inventory.

6. Payables Turnover

$$\text{Payables Turnover} = \frac{\text{Cost of Goods Sold}}{((\text{Beginning AP} + \text{Ending AP}) \div 2)}$$

The payables turnover ratio measures the number of times a year that a company pays its average accounts payable balance. If the ratio is too high, the firm may be paying too quickly and not taking advantage of the interest free credit available from accounts payable. If the ratio is low, then the firm may be a credit risk and/or losing valuable discounts. Once again, this ratio can be divided into 365 to estimate the number of days the average account payable is outstanding before being paid.

7. Cash Conversion Cycle

$$\begin{array}{rcccl} \text{Cash} & & \text{Inventory} & & \text{Days to} & & \text{Payable} \\ \text{Conversion} & = & \text{Turnover} & + & \text{Collect} & - & \text{Payment} \\ \text{Cycle} & & \text{Period} & & \text{Receivables} & & \text{Period} \end{array}$$

The cash conversion cycle measures the time between the outlay of cash for inventory and the collection of cash from the sale of that inventory.

B. OPERATING EFFICIENCY RATIOS

1. Net Fixed Asset Turnover

$$\text{Net Fixed Asset Turnover} = \frac{\text{Net Sales}}{((\text{Beginning F/A} + \text{Ending F/A}) \div 2)}$$

This ratio can be an indication of management's ability to effectively utilize fixed assets. Additionally, a low ratio can often be an indication of obsolete or impaired fixed assets.

2. Total Asset Turnover

$$\text{Total Asset Turnover} = \frac{\text{Net Sales}}{((\text{Beginning Total Assets} + \text{Ending Total Assets}) \div 2)}$$

This ratio is an indication of management's ability to effectively utilize total assets; however, it is important to note the asset turnover ratio can be affected by factors other than a firm's efficiency. A firm with newer and less depreciated assets will cause the ratio to fall relative to the firms with older or more depreciated assets. Additionally, a low ratio can often be an indication of obsolete or impaired assets.

C. OPERATING PROFITABILITY RATIOS

Operating ratios are used in the evaluation of management performance.

1. Cost of Sales/Sales (%)

$$\text{Cost of Sales} = \frac{\text{Cost of Sales}}{\text{Net Sales}}$$

This ratio is an indication of the subject company's operating environment and operating efficiency. For example, if the company's cost of sales/sales ratio is increasing, it may indicate competition is forcing the company to cut profit margins or it may indicate the company is unable to pass its increasing costs to its customers.

2. Gross Margin (%)

$$\text{Gross Margin} = \frac{\text{Net Sales} - \text{Cost of Sales}}{\text{Net Sales}}$$

This ratio expands on the issues found by analyzing the cost of sales ratio. Note that the sum of the two ratios (cost of sales and gross margin) equals 100%.

3. Operating Expenses/Sales (%)

$$\text{Operating Expenses} = \frac{\text{Operating Expenses}}{\text{Net Sales}}$$

Management generally has greater control over operating expenses than it has over revenue. This ratio is often used as a measure of management's ability to control its operating expenses.

4. Operating Margin (%)

$$\text{Operating Margin} = \frac{\text{Income from Operations}}{\text{Net Sales}}$$

This ratio expands on the issues identified by analyzing the operating expense ratio.

5. Return on Assets (%) (ROA)

$$\text{ROA} = \frac{\text{Net Income}}{((\text{Beg. Total Assets} + \text{Ending Total Assets}) \div 2)}$$

This ratio is an important test of management's ability to earn a return on assets funded from all sources (debt and equity). The income figure used in computing this ratio should be income before deducting interest expense, since interest is a payment to creditors for funds used to acquire assets. Income before interest reflects earnings throughout the year; therefore it should be related to the average investment in assets during the year.

6. Return on Equity (%) (ROE)

$$\text{ROE} = \frac{\text{Net Income}}{((\text{Beg. Common Equity} + \text{Ending Common Equity}) \div 2)}$$

Because interest and dividends paid to creditors and preferred stockholders are fixed in amount, a company may earn a greater or lesser return on the common stockholders' equity than on its total assets.

Financing with fixed-return securities is often called trading on the equity. Results may be favorable or unfavorable to holders of common stock. For example, if the rate of return on total assets is greater than the average rate of payment to creditors and preferred stockholders, the common stockholders will gain from trading on the equity and return on common equity will increase.

D. BUSINESS RISK (OPERATING) ANALYSIS

Business risk refers to the volatility of earnings over time. (See the formal definition in the International Glossary of Business Valuation Terms in Chapter Eight.) There are three ratios (two of these require knowledge of basic statistics to derive) used to assess the business risk.

1. Coefficient of Variation of Operating Income (EBIT)

$$\text{Coef. of Var. Operating. Inc.} = \frac{\sigma \text{EBIT}}{\mu \text{EBIT}}$$

σ – is the symbol for the standard deviation

μ – the symbol for the Mean (or average). Note. It is important to recognize that there is a difference between the mean and median, notwithstanding that these numbers may be the same. Median is the mid-point in a sequence of numbers.

Valuation analysts will usually compute the coefficient of variation (C of V); data from one or more business cycles is used to derive the data for the formula [In day 3 (Case) and day 5 (CVTA) the C of V will be revisited].

2. Sales Volatility

$$\text{Coef. of Sales Volatility} = \frac{\sigma_{\text{Sales}}}{\mu_{\text{Sales}}}$$

Again, sales volatility is measured in one or more business cycles.

3. Degree of Operating Leverage (DOL)

$$\text{DOL} = \frac{\% \Delta \text{EBIT}}{\% \Delta \text{Sales}}$$

DOL measures the inherent risks of operations of the business and is largely a function of a firm's cost structure and level of capital intensity. It is important to note that DOL is independent of the risk that is due to financial leverage.

Practice Pointer

Business Risk is largely a function of a firm's cost structure. The greater the proportion of variable costs, the better a firm can weather an economic downturn or rapid industry obsolescence. Companies with significant capital investment and large fixed costs have less ability to adapt to poor or changing economic or competitive conditions, making them higher risk.

E. FINANCIAL RISK (LEVERAGE) RATIOS

The inclusion of debt in a firm's financial structure increases its earnings volatility in relation to sales, thus increasing risk. Financial leverage ratios should be interpreted in conjunction with a firm's degree of operating leverage (DOL) and sales volatility. As a general rule, valuation analysts will see that firms with high DOL and sales volatility tend to have low financial leverage ratios, while firms with low DOL and sales volatility tend to have high financial leverage ratios.

1. Long-Term Debt-to-Equity Ratio (or Debt/ Equity Ratio)

$$\text{Debt/Equity} = \frac{\text{Long-Term Debt} + \text{Deferred Tax Liabilities}}{\text{Total Equity}}$$

This ratio is controversial. Some valuation analysts will exclude deferred tax liabilities if they believe these liabilities will not eventually be paid. Some analysts will include the effect of operating leases, especially if the lease should have been capitalized.

2. Total Debt-to-Total Invested Capital Ratio

$$\text{Debt/Capital} = \frac{\text{Current Liabilities} + \text{Long-Term Debt}}{\text{Total Liabilities} + \text{Total Capital}}$$

This ratio measures what percentage of a firm's assets is financed with debt.

3. Total Debt-to-Total Assets Ratio

$$\frac{\text{Current Liabilities} + \text{Long-Term Debt}}{\text{Total Assets}}$$

The debt/asset ratio shows the proportion of a company's assets which are financed through debt. If the ratio is less than one, most of the company's assets are financed through equity. If the ratio is greater than one, most of the company's assets are financed through debt. Companies with high debt/asset ratios are said to be "highly leveraged."

4. Interest Coverage Ratio

$$\text{Interest Coverage} = \frac{\text{Earnings Before Interest and Taxes (EBIT)}}{\text{Interest Expense}}$$

This ratio is a measure of a firm's ability to meet its interest payments. A high ratio may indicate a borrower would have little difficulty in meeting the interest obligations of a loan. This ratio also serves as an indicator of a firm's capacity to take on additional debt.

5. Operating Cash Flow Ratio (OCF Ratio or CFO Ratio)

$$\text{OCF Ratio} = \frac{\text{OCF}}{\text{Current Liabilities}}$$

This ratio measures a firm's ability to generate the resources required to meet its current liabilities.

6. Operating Cash Flow to Long-Term Debt (OCF/ LTD)

$$\text{OCF/LTD} = \frac{\text{OCF}}{\text{Book Value of Long-Term Debt} + \text{PV of Lease Obligations}}$$

This ratio measures the ability to service total long-term debt, including lease obligations. Since operating cash flows already reflect interest expense, payment of interest expense is reflected in the ratio.

7. Operating Cash Flow to Total Debt Ratio (OCF/ TD)

$$\text{OCF/TD} = \frac{\text{OCF}}{\text{Total Long-Term Debt} + \text{Current Interest Bearing Liabilities}}$$

This ratio measures the ability to service total interest bearing debt. Since operating cash flows already reflect interest expense, payment of interest expense is reflected in the ratio.

V. COMPARATIVE ANALYSIS

Comparative analysis uses information gleaned from the two previous sources, common-size analysis and ratio “trend” analysis. As indicated by its title, comparative analysis involves comparison of the subject company’s status and performance with those of specific other companies or industry averages. Comparative analysis can involve either a comparison over a historical period of more than one year or over the latest complete 12-month period.

A. SOURCES OF INFORMATION

In many cases, specific company data for comparison is not available, and the analyst will need to use general industry information. Some of the most common sources for general industry information are:

1. Almanac of Business and Industry Ratios from Prentice Hall, Inc.
2. Annual Statement Studies from Risk Management Associates (RMA)
3. Integra statistics by industry
4. IRS statistics from corporate tax returns
5. Key Business Ratios from Dun & Bradstreet, Inc.
6. Specific industry statistics from industry associations

Practice Pointer

The practitioner should be aware of the pros and cons in the utilization of different data sources.

B. QUALITY OF INFORMATION

In constructing a comparative analysis, the method of accounting for both the subject company and the comparison company or companies should be consistent. This is often very difficult to establish, unless the provider of the information adequately discloses the method of accounting for the comparison. In addition, the following considerations have become generally accepted as important checklist components to ensure that a specific company comparison is meaningful:

1. Companies must be of similar size, relative to sales volume and total assets
2. Companies must have similar historical and current levels of profitability
3. Companies must have similar competitive positions within the industry
4. Companies must be in the same or similar line of business
5. Companies must have similar historical rates of growth
6. Companies must have similar capital structures
7. Companies must offer a similar product line

C. STEPS IN COMPARATIVE ANALYSIS

The following steps outline a typical comparative company analysis. (For illustrative purposes this section will assume that the analyst is relying on RMA data; the use of RMA should not be construed as a preference of RMA over Integra or other alternative data sources.)

1. Prepare common-size income statements and common-size balance sheets
2. Determine results of selected key financial ratios of the subject company for the latest 12-month period

3. Determine the appropriate SIC# (Standard Industrial Classification) or NAICS# (North American Industrial Classification System) of the subject company
4. Obtain RMA “Financial Statement Studies” for appropriate SIC number and prepare a worksheet that lists subject company financial ratios, RMA financial ratios, and the differences between the two. **NOTE:** RMA data is gathered from financial information submitted to banking and other financial institutions to secure credit
5. Analyze the common-size financial statements and comparative ratios and draw conclusions relative to:
 - a. Liquidity
 - b. Utilization of Assets (efficiency)
 - c. Profitability
 - d. Business Risk
 - e. Financial Risk (leverage)

The following page provides an outline of the data, including common-size financial statement data and financial ratios, provided by BVMPro.

Financials Folder from BVMPPro – showing what is available within the software. Using this software developed by valuation analysts for valuation analysts makes your task much easier.

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In addition to the foregoing chapter of Fundamentals, Techniques and Theory, there are other sources of information which many professionals in the valuation business have read and/or added to their library. The valuation analyst, progressing through the steps in a valuation, should be generally familiar with the body of knowledge represented by this text and other publications. These can include books, papers, articles, seminars, classes and the experience of a valuation mentor or other business mentors the valuation analyst may know. Those at the top of the field continue to learn and grow. Recommended reading includes, but is not limited to:

- Blackman, Irving L., *Valuing Your Privately Held Business, The Art & Science of Establishing Your Company's Worth*.
- Campbell, Ian R., and Howard E. Johnson, *The Valuation of Business Interests*, Chapter 3 (Business Analysis).
- Copeland, Tom, Tim Koller, and Jack Murrin, *Valuation: Measuring and Managing the Value of Companies*.
- Damodaran, Aswath, Damodaran on Valuation, *Security Analysis for Investment and Corporate Finance*, Chapter 5 (Estimation of Growth Rates) and Chapters 10 through 12 (Ratios).
- Dun & Bradstreet, Inc. *Industry Norms and Key Business Ratios*, select by appropriate year.
- Fridson, Martin and Fernando Alvarez, *Financial Statement Analysis: A Practitioner's Guide*.
- Green, Robert, "Using Correlation Analysis in Determining Proper Method to Project Earnings", *The Valuation Examiner*, 1st qtr, 1994.
- Helfert, Erich A., *Techniques of Financial Analysis*, Chapter 1, Part III (The Nature of Financial Statements), and Chapter 3 (Assessment of Business Performance – Ratio Analysis and Performance).
- Hitchner, James R., *Financial Valuation Applications and Models*, Chapter 3 (Financial Statement and Company Risk Analysis).
- Pratt, Shannon P., R. F. Reilly and R. P. Schweihs, *Valuing a Business, The Analysis and Appraisal of Closely Held Companies*, Chapter 8 (Financial Statement Analysis).
- Risk Management Associates, *Annual Statement Studies*, select by appropriate year.
- Rufus, Robert, "Financial Ratios: Use, Predictive Power and the Z-Score", *The Valuation Examiner*, M/J 2003.
- Rutter, Grover, "A Matter of Equity: The Old Safe-Rate Method Yard Stick for Measurement", *The Valuation Examiner*, F/M 1999.
- *Statistical Abstract of the United States*, select by appropriate year.
- Troy, Leo, *Almanac of Business and Industry Ratios*, select by appropriate year.

**BUSINESS VALUATIONS:
FUNDAMENTALS, TECHNIQUES
AND THEORY (FT&T)**

**CHAPTER 2
REVIEW QUESTIONS**

FT&T

CHAPTER REVIEW QUESTIONS

Chapter 2: Financial Statement Analysis & Calculation of Financial Ratios

- Chianti Corp. reports the following items in their Balance Sheet: \$70,000 fixed assets, \$3,500 cash, \$1,200 short term marketable securities, \$4,500 in accounts receivables, \$6,000 in inventories, \$1,000 in prepaid expenses, \$4,000 accounts payable and \$2,100 in current notes payable. What is Chianti Corp.'s Current Ratio?
 - 7.24
 - 2.65
 - 2.49
 - 1.51
- Assume the same facts as in question number one, what is Chianti Corp.'s Cash Ratio?
 - 1.51
 - 1.75
 - 2.49
 - 0.77

- Assuming that Chianti Corp. reported annual sales of \$100,000, cost of goods sold of \$65,000, average receivables of \$5,600, average inventories of \$3,800, and average payables of \$5,700. What is Chianti Corp.'s Receivables Turnover and Average Receivables Collection Period?

<u>Receivables</u>	<u>Avg. Rec. Collection Period</u>
<u>Turnover</u>	
a. 10.0	36.5
b. 11.61	31.5
c. 6.25	58.4
d. 17.9	20.4

- Assuming the same facts as outlined in question three, what is Chianti Corp.'s Inventory Turnover? And Average Inventory Processing Period?

<u>Inventory</u>	<u>Avg. Inventory. Processing Period</u>
<u>Turnover</u>	
a. 12.4	29.4
b. 26.5	13.8
c. 17.11	21.3
d. 13.4	27.2

- Assuming the same facts as in question three, what is Chianti Corp.'s Cash Conversion Cycle?
 - 7.24 days
 - 26.1 days
 - 9.7 days
 - 5.67 days

6. Assuming that Chianti Corp. reports net income of \$5,200 and that its average total equity is \$49,000, what is Chianti Corp.'s Return on Equity?
- 9.42%
 - 21.20%
 - 10.61%
 - 11.51%
7. Based on the information provided in questions one through six, what is Chianti Corp.'s Net Profit Margin and Equity Turnover?
- | <u>Net Profit Margin</u> | <u>Equity Turnover</u> |
|--------------------------|------------------------|
| a. 9.42% | 2.13 |
| b. 5.2% | 2.04 |
| c. 10.61% | 2.04 |
| d. 8.0% | 4.32 |
8. The conversion of the balance sheet and income statement line items to percentages based on total assets or total sales is often referred to as:
- Trend analysis
 - Common-size analysis
 - Financial ratio analysis
 - Comparative analysis
9. A financial analysis of any business would include all of the following EXCEPT for:
- An analysis of each balance sheet item over the period being analyzed
 - An analysis of industry ratios in the same NAICS code as the company being analyzed
 - An analysis of the income statement, where each item is reported as a percentage of sales
 - An investigation as to the existence of inventory as of the valuation date
10. Ratio analysis will assist the valuation analyst in determining the following:
- The financial condition of the company
 - Identifying all the strengths and weaknesses of the company
 - The relative operating risks of the company
 - Both a and b
 - Both a and c
 - Both b and c
11. The most conservative ratio in measuring a company's solvency is the:
- Current ratio
 - Quick ratio
 - Cash ratio
 - Turnover ratio

12. A high inventory turnover can indicate all of the following EXCEPT:
- Better liquidity
 - Superior merchandising
 - Shortage of inventory
 - Obsolete inventory
13. What type of ratios may a valuation analyst generally use to evaluate management performance?
- Operating profitability ratios
 - Liquidity ratios
 - Financial risk ratios
 - Business risk analysis
14. Which of the following statements is correct?
- A high inventory turnover and a low gross profit may indicate that a higher volume is necessary to produce a satisfactory return on total assets.
 - The net fixed asset turnover ratio is crucial when appraising a service business.
 - If a company's cost of sales/sales ratio is decreasing, it may indicate competition is forcing the company to cut profit margins or it may indicate the company is unable to pass its increasing costs to its customers.
 - Companies with significant fixed operating costs in proportion to variable costs can better weather an economic downturn.
15. Which ratio measures the ability to service total interest-bearing debt?
- Interest coverage ratio
 - Operating cash flow ratio
 - Operating cash flow to long-term debt
 - Operating cash flow to total debt ratio
16. What is the purpose of dividing a receivable or inventory turnover ratio by 365?
- We can never do enough math, so why not add another equation.
 - To determine the number of days it may take to convert a current asset into cash.
 - To determine if a company is effectively utilizing its fixed assets.
 - To determine a company's operating efficiency.