**FI 393**

**Chapter 2—Working with Financial Statements**

**Notes Outline**

1. Standardized financial statements are useful for:

* Comparing financial info from year to year
* Comparing companies of different sizes, particularly w/in the same industry

1. On a common-size Balance Sheet, how is each item/account expressed?

* All accounts = percent of total assests (%TA)

1. On a common-size Income Statement, how is each item/account expressed?

* **A financial statement measuring performance over a specific period of time.** 
  + Report revenues first and then deduct any expressions for the period
  + NET INCOME = REVENUE – EXPENSES
* GAAP Matching Principle:
  + Recognize revenue when it accures
  + Match expenses required to generate revenue to the period of revenue recognize
  + Accural based accounting
* Noncash Items
  + Expenses charged against
* All line items

1. Define *Financial Ratios*.
2. What is a benefit of ratio analysis?
3. What is the primary concern with regard to Liquidity Ratios? What specific assets and liabilities do these ratios focus upon?
4. Who, other than management, would be particularly interested in a firm’s liquidity ratios?
5. The Current Ratio is calculated as:

* What does this ratio measure?
  + What would we expect this ratio to be (at least) for a healthy firm?
  + Generally, the current ratio should be somewhere between \_\_\_\_ and \_\_\_\_\_.
  + Typically, a \_\_\_\_\_\_\_\_\_\_ current ratio is better; however, if a firm has a very \_\_\_\_\_\_\_ current ratio, this may suggest that the firm is not \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. The Quick Ratio is calculated as:
   * What does it measure?
2. Regarding the Quick Ratio, why would we want a liquidity measure net of inventory?
3. Evaluating Liquidity Ratios: Consider the 2017 fiscal year-end data for three major competitors in the Consumer Goods industry. Which firm is in the best liquidity position? Which is in the worst? Why?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **(in millions)** | **Procter & Gamble** | **Johnson & Johnson** | **Kimberly-Clark Corporation** |  |
| Current Assets | $26,494 | $65,032 | $5,115 |  |
| minus Inventories | $4,624 | $8,144 | $1,679 |  |
| Quick Assets | $21,870 | $56,888 | $3,436 | CA - Inv. |
| Current Liabilities | $30,210 | $26,287 | $5,846 |  |
| Current Ratio | 0.8770 | 2.4739 | 0.8749 | CA / CL |
| Quick Ratio | 0.7239 | 2.16 | 0.5878 | QA / CL |

Best:

Worst:

1. What do Financial Leverage Ratios measure?
2. What is the primary concern addressed by Financial Leverage Ratios?
3. The Total Debt Ratio is calculated as:
   * Measures the percentage of total assets (TA) financed with debt.
   * It takes into account all debts of all maturities to all creditors.
4. There are two variations of the Total Debt Ratio—the Debt-Equity Ratio and the Equity Multiplier:

* The Debt/Equity Ratio measures the number of dollars of ­debt financing for every dollar of ­equity financing.
* The Equity Multiplier measures the dollars of assets on the balance sheet for every dollar of equity financing.

1. The Times Interest Earned (TIE) Ratio is calculated as:
   * The TIE ratio is not a “leverage ratio” but is included here because it is a measure of \_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   * What does it measure?
   * Which is better—a high or low TIE ratio? Why?
2. The “best” amount of financial leverage may differ for firms, even those in the same industry. However, the following is important to keep in mind:
   * Generally speaking, higher leverage ratios (total debt, debt-equity and equity multiplier ratios) make firms \_\_\_\_\_\_\_\_\_ to creditors because of the increased risk of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   * **Very high leverage ratios are usually considered to be a sign of poor debt management.**
3. Evaluating Leverage Ratios: Consider the 2017 fiscal year-end data for three fictious competitors in the Oil industry. Which firm has the strongest debt/leverage management? Which has the weakest?

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Monet Engery** | **Picasso Oil** | **van Gough Oil** |
| Total Debt Ratio | 32.71% | 54.22% | 37.53% |
| Debt-Equity Ratio | 46.43% | 118.44% | 60.08% |
| TIE Ratio | 5.3 | 7.1 | 4.8 |

Strongest:

Weakest:

1. What is the primary concern addressed by Asset Management Ratios?
2. The Inventory Turnover Ratio is calculated as:

* What does this ratio measure? Is a higher or lower number better?

1. How do we calculate Days’ Sales in Inventory?
   * What does it measure? Is a higher or lower number better?
2. Accounts Receivable Turnover is calculated as:
   * This ratio measures the number of dollars of credit sales produced per dollar of accounts receivable.
   * Is a higher or lower number better?
3. Days’ Sales Outstanding (DSO) is calculated as:
   * What does it measure? Is a higher or lower number better?
4. Fixed Asset Turnover is calculated as:
   * It measures the number of dollars of sales produced per dollar of net fixed assets.
   * Which is better—a higher or lower number?
5. Total Asset Turnover is calculated as:
   * What does it measure? Is a higher or lower number better?
6. The Capital Intensity Ratio is calculated as:
   * The Capital Intensity Ratio indicates how many dollars’ worth of assets must be in place to generate $1 in Sales.

\*Be able to evaluate the asset management ratios for two or more firms and determine which firm is doing a better job of managing its various assets (total assets, inventory, accounts receivable, etc.).

1. What do the Profitability Ratios demonstrate?
2. The Profit Margin is calculated as:
   * This is the percentage of sales left after all firm \_\_\_\_\_\_\_\_\_\_\_\_\_\_ are deducted from \_\_\_\_\_\_\_\_\_.
   * All else equal, a \_\_\_\_\_\_\_\_\_ profit margin is better.
   * What does a higher profit margin indicate?
3. Return on Assets is calculated as:

* What does it measure? Is a higher or lower number better?

1. How do we calculate Return on Equity?

\*Technically, this should be Common Shareholders’ Equity and will be the same thing as Total Equity given in Balance Sheets we cover in this class. I frequently abbreviate this as *SE*.

* + What does this measure? Is a higher or lower number better?

1. The Dividend Payout Ratio is calculated as:
   * It measures the percentage of Net Income paid out to shareholders.
   * It reflects how much of the profit the firm retains versus how much it pays out.
     + The lower the dividend payout ratio, the more profits the firm retains for future growth or other projects.
   * How do we calculate the Retention Ratio from the Dividend Payout Ratio?

\*Again, be able to compare the profitability or two or more firms (or a firm relative to the industry average) and determine a firm’s strengths/weaknesses in profitability.

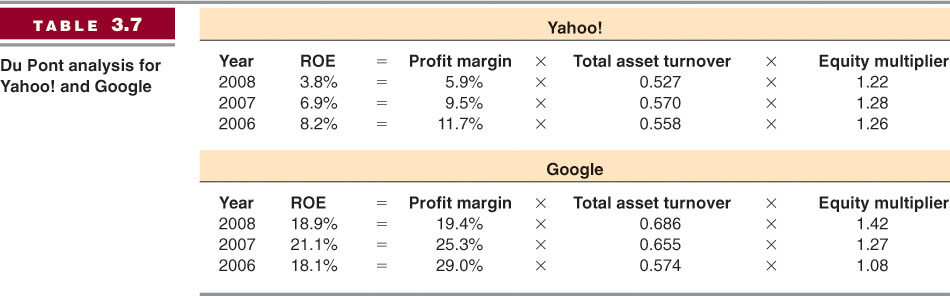
1. What do Market Value Ratios measure?
   * And what do they *reflect*?
2. The Price-to-Earnings Ratio is calculated as:
   * What does the PE ratio measure?
   * Managers and investors often use PE ratios to do what?
   * High-PE firms are expected to have high future \_\_\_\_\_\_\_\_\_\_, rapid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ increases or both. High-PE ratio stocks are also \_\_\_\_\_\_\_\_\_\_\_\_: investors pay higher prices today in anticipation of higher future \_\_\_\_\_\_\_\_\_\_\_\_\_.
3. The Market-to-Book Ratio is calculated as:

It (the M/B ratio) compares the current \_\_\_\_\_\_\_\_\_\_\_\_ of the firm’s \_\_\_\_\_\_\_\_\_ (price) to its historical \_\_\_\_\_\_\_\_\_.

1. ROE can be calculated either straightforward, as previously, or through the DuPont Identity.
   * The DuPont Identity breaks ROA and ROE into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ratios using the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ and income statement.
2. The DuPont Identity equation is as follows:



1. According to the DuPont Identity, if a firm’s ROE differs from that of other firms in the industry, then the difference is driven by one of three things. These three things are:
2. Profit Margin: Measures firm’s operating efficiency and well it controls cost.
3. Total Asset Turnover: Measures the firm’s assets use efficiency and how well it manages its assets
4. Equity Multiplier: Measures
5. Compare the DuPont components of ROE for Yahoo! and Google:



What do we see about the relative performance of Yahoo! and Google?

* Google is out performing Yahoo!. They out perform in all categories especially profit margin and cost efficiency.

1. The internal growth rate tells us how much the firm can grow assets using \_\_Retained Earnings as the ONLY source of financing\_\_.
2. The internal growth rate is calculated as:

Where: *ROA* = Return on Assets

*b* = retention ratio = 1 – dividend payout ratio

1. The sustainable growth rate tells how much the firm can grow assets using \_\_internally generated funds And Issuing Debt to maintain a constant debt ratio\_\_\_.
2. The formula for the sustainable growth rate is:

Where: *ROE* = Return on Equity

*b* = retention ratio

* Maximizing the sustainable growth rate helps maximize firm value.

1. Each of the following are determinants of sustainable growth. How does each affect the firm’s ability to finance growth internally or externally?
2. Profit Margin— OPERATING EFFICIENCY - INCREASES IN PM INCREAASES THE FIRM’S ABILITY TO GENERATE FUNDS INTERNALLY.
3. Total Asset Turnover— ASSET USE EFFICENCY- INCREASES THE SALES GENERATED FOR EACH $ IN ASSETS -🡪 DECREASES THE FIRM’S NEED FOR NREW ASSETS AS SALES GROW.
4. Financial Leverage— CHOICE OF OPTIMAL DEBT RATIO – REFLECTS IN THE EQUITY MULTIPLER IN DUPONT IDENTY – INCREASES IN LEVERAGE MAKE ADDITIONAL DEBT FINANCING AVAILABLE TO FUND ASSET GROWTH.
5. Dividend Policy— CHOICE OF HOW MUCH TO PAY TO SHAREHOLDERS VS. REINVESTING IN THE FIRM. – DECREASES IN DIVEND PAYOUTS 🡪 INCREASES IN FUNDS REINVESTED I THE FIRM. – FUNDS REINVESTED IN THE FIRM ALSO HELP FUND ASSETS GROWTH.
6. There are two internal uses for financial statement analysis:
   * **Performance evaluation** – compensation of managers and comparison between divisions
   * **Planning for the future** – guide in estimating future cash flows
7. Regarding “External Uses,” financial statements are a prime source of \_Information About a Firm’s Financial Health\_\_.
8. Benchmarking is the process of doing what?

* The process of analyzing firm performance relative to other firms in the same industry.

1. Each of the following are “cautions in using ratios to evaluate firm performance.” Make sure that you understand what each means or how it can cause problems.
2. Financial statement data are historical and may not reflect future performance.

* Can make projections using historical data but may be inaccurate if historical performance may not persists.

1. Firms use different accounting procedures which can make comparisons difficult.

* Depreciation of assets may vary: Straight line vs MACRS
* One firm may use FICO and another may use LIFO

1. Non-U.S. firms may use different accounting procedures that do not conform to GAAP.

* US firms us GAAP to create financial statements; however, a broad uses something different.

1. Sales and expenses may be seasonal.
2. Large firms (conglomerates) have multiple lines of business which can make it difficult to find a comparable competitor
3. Firms can use ‘window dressing’ to make financial statement look better
4. Individual analysts may calculate ratios in modified forms.
5. Differences in capital structure will impact some ratios.