Spreadsheet Case 3

Camby Investment Advisers

Problem: Analyze financial ratios

Management skills: Deciding

PC skills: Formulas
                                          Spreadsheet control
                                          Reporting

File: CAMBY_Q.XLS

Camby Investment Advisers (CIA) is a small-investment advising firm that has just opened in Pittsburgh, PA. It is trying to take market share from large brokerage houses by offering custom advice to clients on long-term investing, rather than recommending the stock-of-the-week strategy touted by its competitors.

Clients may call or visit to seek expert advice about particular stocks they are interested in. Paul Morgan, a prospering attorney, has expressed an interest in two firms in the do-it-yourself, home-improvement sector, and he wants to know if either one will make good investments. These firms are Home Depot and Lowe's, both of which are listed on the New York Stock Exchange.

Home Depot is the world's largest home-improvement retailer and is among the top ten retailers in the entire United States. As of late December 1999, the company operated over 900 stores and employed roughly 200,000 employees in the U.S., Canada, Puerto Rico, and Chile. Fortune Magazine voted Home Depot as "America's Most Admired Specialty Retailer" for over five years. The company advertises itself as offering the lowest prices in home improvement with "the highest levels of customer service."

Lowe's is one of the United States' largest retailers. Operating in 30 to 40 states, the company operates between 500 and 600 stores and has annual sales over $10 billion. Like Home Depot, Lowe's focuses on the do-it-yourself market as well as contractors and other commercial customers. Lowe's stocks roughly 40,000 home-improvement items—from tools to lumber to appliances to home-décor items. Like Home Depot, Lowe's also offers a huge ordering program. Both companies offer common stock.

To make sound recommendations, CIA's analysts must carefully examine a company's financial statements. The purpose of financial statements is to identify the major sources, uses, and flows of funds within an organization. The three principal financial statements used in business are income statements, balance sheets, and cash flow statements.

Income statements (also called operating statements) summarize the income, expenses, and profits of businesses for a specified period. The purpose of income statements is to show the profitability or unprofitability of firms during a specified period, usually a year, quarter, or month.

Balance sheets identify the assets, liabilities, and owner's (or shareholders') equity of a firm at a particular point in time. The difference between assets and liabilities is net worth or equity (literally what the organization is worth net of all other factors). Cash flow statements provide detailed information on total receipts and disbursements of cash. Cash flow statements are like checking account registers for individuals. You will use the 2001 income statements and balance sheets of Home Depot and of Lowe's for this case.

Certain financial ratios based on figures from financial statements have been traditionally used to assess a company's financial health and performance. There are five kinds of financial ratios that you can apply to assess the financial position of a firm.

1. Liquidity Ratios

Various liquidity ratios measure a firm's liquidity, its ability to draw on cash and other current assets to pay its financial obligations. Two commonly used liquidity ratios are the *current ratio* and the *quick ratio*, or *acid test*.

(a) Current Ratio =   Current Assets
                                       Current Liabilities

(b) Quick Ratio, or Acid Test =   Current assets - Inventory
                                   Current liabilities

The current ratio is the most commonplace measure of short-term solvency. If current liabilities are rising faster than current assets, this may be a harbinger of financial difficulty. The quick ratio measures the firm's ability to pay off short-term obligations without relying on the sale of inventory, which is the least liquid of the firm's current assets.

2. Asset Management Ratios

Another group of ratios measures how effectively a firm is managing its assets. One of these is the *total assets utilization ratio*, which measures the utilization or turnover of all of the firm's assets.

(c) Total assets utilization=   Sales
                                                 Total assets

3. Debt Management Ratios

These ratios determine the extent to which a firm uses debt financing. If equity, or owner-supplied funds, accounts for only a small portion of a firm's total financing, the risks of the firm are borne mainly by creditors. On the other hand, by raising funds through debt, owners can control the firm with a smaller investment of their own. If the firm returns more on the borrowed funds that it pays in interest, the return on the owner's capital is magnified, or leveraged. An important ratio is the *debt ratio*, which measures the percentage of a firm's total funds provided by creditors.

(d) Debt ratio =   Total liabilities
                                    Total assets

Creditors prefer low debt ratios, whereas it may be advantageous for owners to seek higher debt to leverage their money and earnings. However, a debt ratio that is too high signals trouble repaying loans and too much reliance on borrowed money to pay for the firm's operations.

4. Profitability ratios

      Profitability ratios illustrate the combined effects of liquidity, asset management, and debt management on profits. Important profitability ratios measure the *return on total assets (ROA)*, the *return on common equity (ROE)*, or return on stockholders' investments, and the *profit margin on sales*.

(e) Return on Total Assets (ROA) = $\dfrac{\text{Net profit after taxes}}{\text{Total assets}}$

(f) Return on Equity (ROE) = $\dfrac{\text{Net profit after taxes}}{\text{Net worth (equity)}}$

(g) Profit Margin = $\dfrac{\text{Net profit after taxes}}{\text{Sales}}$

5. Market Value ratios

      These ratios help indicate what investors think of the company's past performance and future prospects. The market value ratios (and stock price) will be high if a firm has strong liquidity, asset management, debt management, and profitability ratios. The most widely used market value ratio is the *price/earnings ratio*.

(h) Price/Earnings Ratio = $\dfrac{\text{Price per share}}{\text{Earnings per share}}$

      To evaluate a firm's financial ratios properly, you must compare the ratios to ratios for comparable businesses. You can find financial ratio data on comparable businesses in publications like Dun and Bradstreet's *Industry Norms & Key Business Ratios* and Robert Morris's *Annual Statement Studies*. Both publications group businesses by standard industry classification codes and provide financial ratio data by standard industry classification code.

Tasks

      There are five tasks to this case:

1.   Examine the 2001 income statements and balance sheets of Home Depot and Lowe's, which can be found by loading the file **CAMBY.XLS** from your data diskette. All data are based on the publicly available 2001 annual reports of these firms.

2.   Print out the financial statements so you have a hard copy to work with. Look at them very closely.

3. Assign range names to the income statement data, the balance sheet data, and the area of the worksheet containing the financial ratios.   Create a table of range names below the worksheet. Format the ranges with the income statement and balance sheet data to display a comma with zero decimal places. Format the ranges with the financial ratios, earnings per share, and stock price to display two decimal places.

4. Calculate the eight financial ratios outlined above for each company at the end of the financial statements. Print out the ratios for both companies.

5. In a single paragraph write an analysis of both companies. If possible, find statistics on financial ratios for comparable businesses using either the Dun and Bradstreet or Robert Morris publication. Based on the information provided in this case, is each firm financially sound? Which would make the better investment? Review the financial statements of both companies for any items that might help explain their financial position.

Additional Problems

1. Obtain the current stock price for each of these companies and recalculate the Price/Earnings ratio.

2. Use the Web to search the EDGAR database [www.sec.gov/edgar.shtml] maintained by the Securities and Exchange Commission. This database contains companies' quarterly and annual financial reports and other documents filed with the SEC. Use this information to recalculate the financial ratios for both companies. Would that make a difference in your decision?

Time Estimates

Expert: 45 minutes
Intermediate: 1 hour
Novice: 1.5 hours

Excel Tutorial for Spreadsheet Case 3

You do not need to use range names for the solution to this case, but they can be used if you wish when you use different formats for different ranges in your worksheet.

In Course.xls, name the range with the student grade data as GRADES. Name the range with the percentages used in the Assumptions section as PERCENT.

Naming Ranges

You can name a range the with the **Insert/Name/Define** command. To name the range with the percentages PERCENT, you would do the following: highlight the three cells B9:B11, select **Name** from the **Insert** menu, and then select **Define** from the sub-menu. A Define Name dialog box will appear, already containing the percentage range reference. Type the name PERCENT and click the OK Button.

You can alternatively select **Insert/Name/Define**, then select the range once within the dialog box and type the name. Use either procedure to name the range B16:E19 as GRADES.

Creating a Table of Range Names

You can document your range names in a table in your worksheet using the **Insert/Name/Paste** command. Place the table in an unused portion of the worksheet where it will not overlay any data. The spreadsheet design principles introduced in Chapter 2 suggest placing the range name table below the leftmost portion of the worksheet.

To create the range name table, move to the cell where you want the table to appear and select the **Insert/Name/Paste** command. A dialog box appears, listing the named ranges. The purpose of this dialog box is to paste a selected Name in the formula bar. However, we are using the alternative purpose of the dialog box: pasting a list of range names and their references onto the worksheet. To do this, click the Paste List button. This will result in a worksheet resembling that in Figure 3-4.

Figure 3-4