Welcome to session 1 of the workshop on evaluating management.

Introduction

One of the basic NAIC (Better Investing) principles is to invest in high quality growth companies. Sections 1 and 2 of the SSG are used to evaluate management with respect to consistent growth and profitability. In many cases the information in Sections 1 & 2 performs this function very well. However, nothing is perfect and from time to time there have been suggestions/questions concerning the use of alternative methods that may aide in evaluating management.

Optional Reading

A. The workshop will probably be most useful for those who are have some experience using Sections 1 & 2. Excellent discussions of how to interpret Sections 1 & 2 are contained in Chapters 7, 8, 9 and 13 of Ellis Traub's book "Take Stock."

B. Another good description of how to interpret the Section 1 graph is contained in the Preferred Procedure Workshop that was presented by Ann Cuneaz. Point your browser to:
http://community.compuserve.com/n/pfx/forum.aspx?nav=messages&tsn=1&tid=29336&webtag=ws-naic

Then download the attachment in Message #1 and look at pages 2 through 7.

C. In 1998 I conducted a very long workshop on Ratio Analysis. Some parts are out of date, but others are still relevant. Several excerpts from the 1998 workshop will be provided as attachments for this workshop.

Workshop Content

The workshop consists of three parts. Parts 1 and 2 are brief and presented today.

Part 1 is a review of the strengths and possible weaknesses of Sections 1 & 2.

Part 2 is a list of some alternate/additional methods for evaluating management.

Part 3 contains examples of how free information available in a useful format via the internet can be used to quickly study items listed in Part 2. Even so, a more detailed analysis will consume more time. It will be up to each individual to decide which, if any, of the alternate methods are worth the extra effort needed to use them.

In general it will not be worthwhile to perform all of the alternate/additional methods for every company that is being evaluated. Instead, in cases where an SSG has been

completed and a company appears to be a strong candidate for purchase, then perform a more detailed analysis of management before placing a buy order.

PART 1

The following is a **top level summary of my opinions** about the strengths and weakness of SSG Sections 1 & 2 plus some alternate methods that have been suggested for evaluating management.

1. In my opinion the greatest strength of the SSG is using a semi-log graph in Section 1. I don't know of any better way to quickly and accurately visualize the rate of growth, the consistency of growth and projected future growth.

2. The official version of Section 2 is a table that shows two measures of profitability; pre-tax profit margin (PTPM) and return on equity (ROE). We are told to look for steady or increasing PTPM and ROE. There have been suggestions that it may be desirable to look at other measures of profitability such as return on invested capital (ROIC), return on assets (ROA), operating margin (OM) and/or net profit margin (NPM). I tend to agree that evaluation of management would be enhanced by looking at some, but not necessarily all, of these additional measures.

3. The most significant weakness of the SSG with respect to evaluating management is that very little attention is given to balance sheet items. Stock Analyst and now Toolkit provide Debt/Equity data as a third item in Section 2. However, it seems to me that judicious use of additional data contained in the balance sheet and the statement of cash flows would help the evaluation of management.

PART 2

This part lists some items typically included in finance textbooks for evaluating management. Some of these are included in the SSG. The others will be used as a starting point for selecting items to supplement the SSG.

Growth

Sales (SSG Section 1)

Earnings (SSG Section 1)

Profitability

Gross Margin

Operating Margin

Pre-Tax Profit Margin (SSG Section 2A)

Net Profit Margin

Return on Assets

Return on Equity (SSG Section 2B)

Turnover (or Efficiency)

Receivables Turnover

Inventory Turnover

Assets Turnover

Liquidity

Current Ratio

Quick Ratio

Leverage

Long Term Debt to Equity (SSG Section 2C)

Total Debt to Equity

Long Term Debt to Capital

For the most part examples will be used to illustrate significant points instead of getting into mathematical details.

Internet Resources

The workshop will use free data that is available on web sites provided by Morningstar and Reuters.

The Morningstar site provides ten years of annual historical data plus some limited quarterly data. It will be used extensively during the workshop.

The Reuters site provides data for five years and five quarters. In some cases it provides more details than Morningstar.

Both sites provide definitions of the data they present. My impression is that the definitions provided by Reuters are more detailed and informative.

I recommend you log on to both sites before we start looking at examples tomorrow.

Point you browser to: www.morningstar.com

Enter a stock ticker symbol in the Quotes box (upper left).

(Fill in the free registration form is you have not used the site before.)

Click on some of the subjects on the left and become familiar with the site.

The most used subjects will be "Key Ratios" and "Financial Statements".

At the bottom left of the data tables click on "Show Data Definitions".

Also, point you browser to: www.reuters.com and repeat the above steps.

Evaluating Management Session 2

Now let's start looking at the groups of items identified in session 1.

Growth
    Sales (SSG Section 1)
    Earnings (SSG Section 1)

The Morningstar site contains some tables of growth rates. However, in my opinion Section 1 of the SSG is superior for evaluating growth. Therefore, let's skip over the Morningstar growth tables and move on to the Profitability group.

Profitability
    Gross Margin
    Operating Margin
    Pre-Tax Profit Margin (SSG Section 2A)
    Net Profit Margin
    Return on Assets
    Return on Equity (SSG Section 2B)

The six items in this category may be separated into two sub-categories. The first four ratios are measures of profit relative to sales. The Income Statement contains all of the data needed to calculate these four ratios. The final two ratios are a measure of profit relative to the assets being used by a company. Data from both the Balance Sheet and the Income Statement are used to calculate these two ratios.

The Morningstar site contains a table showing ten years of data for all six of the ratios listed above. The table illustrates the relationships between the six ratios. In order to gain an appreciation for the usefulness of the table let's look at some actual data.

The example will be Bed Bath And Beyond (BBBY). This is a high quality company. Don't expect to see any obvious red flags. However, you might gain some interesting insight into how the company operates.

If you have access to OPS data and Toolkit or NSA open an SSG for BBBY for reference. For others I have attached a file containing cropped sections of the SSG.

Point you browser to: www.morningstar.com
Enter BBBY in the Quotes box (upper left).
Scroll down a little until you see Key Ratios on the left. Click on it.
This will bring up a table of Profitability data.

The top half of the table uses the "common size" format where all of the data is expressed as a percentage of sales. It shows Gross Margin, Operating Margin and EBT (pre-tax profit) Margin. In Section 2A of the SSG we look for companies with an EBT Margin

that is steady or slightly increasing. Typically we will want to see the same behavior for gross Margin and Operating Margin.

1. The attached SSG shows that Pre-tax Profits have been increasing faster than Sales for the past 5 years. (The Pre-tax Profit line is rising faster than the Sales line on the SSG Section 1 graph and the values in Section 2A for the past 5 years are increasing.) The top half of the Morningstar Profitability table provides insight into how management is doing this.

2. Starting at the top of the Morningstar table we see that since year 2000 the Cost Of Goods Sold (GOGS) has been decreasing slightly. This produces a slight increase in Gross Margin.

3. SG&A expense has been decreasing significantly and is the primary reason for the noticeable increase in Operating Margin.

4. Net Interest Income is small and produces a minor upward shift in Earnings Before Taxes (EBT) margins. The values in the table match those in SSG Section 2A.

5. Tax Rate has decreased a little. All of these result in an impressive increase in the Net Profit margin; with SG&A reduction being the dominant contributor.

<u>For future reference, the following is an example of a cause for concern.</u>
Start with the assumption that management anticipates that gross margin will be decreasing.
Also assume that management can delay SG&A and R&D spending for awhile.
<u>A red flag would be a recent reduction in Gross Margin that is offset by reduced SG&A and/or R&D expenses so that EBT Margin was not reduced</u>.

The bottom portion of the table uses the Dupont equation, shown below, to start with Net Profit Margin and arrive at Return on Equity.

Return on Equity = (Net Profit / Sales) X (Sales / Assets) X (Assets / Equity)

Return on Equity = Net Profit Margin X Asset Turnover X Financial Leverage

As previously noted the Net Profit Margin has been increasing. Yet the table and SSG Section 2B show ROE is about constant or slightly decreasing. The Dupont equation shows why.

Note that:
 1. Asset Turnover has been steadily decreasing.

2. This has offset the increase in Net Profit Margin so that Return on Assets (Net Profit/Assets) is about constant.

3. Financial Leverage has varied somewhat, but has not been a significant contributor.

For now, just note that Asset Turnover for BBBY has been decreasing. We will get back to this in Session 4.

In some cases decreasing Asset Turnover may be a warning signal. For example, it could indicate that a company is paying too much for acquisitions or obtaining sub-par returns on Capital Expenditures.
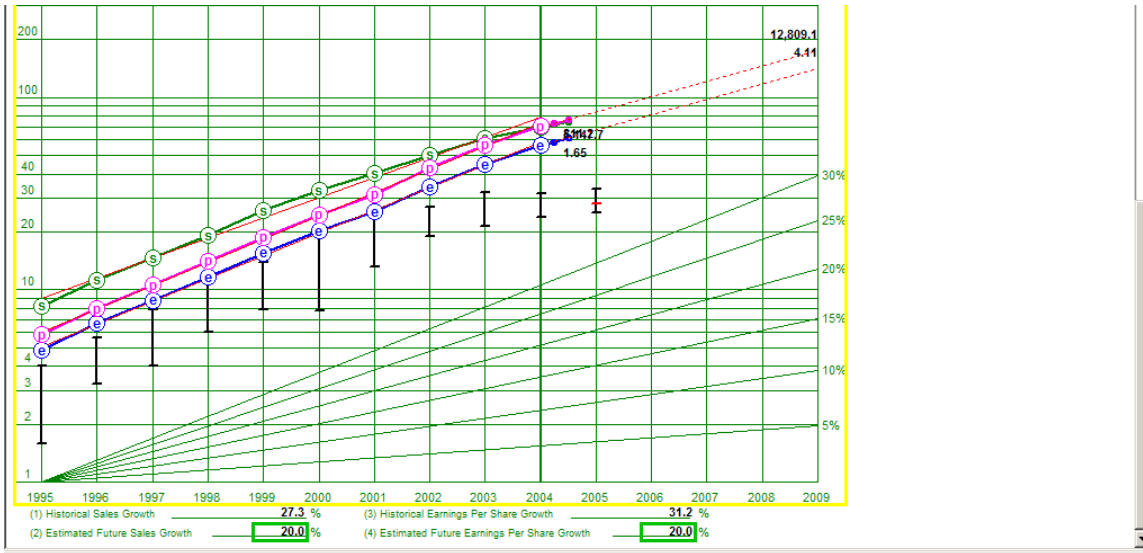
Next, it will be informative to look at data available on the Reuters site. Open another instance of your browser and log onto: www.reuters.com

Enter BBBY in the Quotes box and when the page opens click on Ratios. Scroll down to the summary table of Profitability Ratios. Profit Margin information is presented in comparison to its Industry, Sector, and the S&P 500.

Scroll back up and click on Financial Statements. This will produce a display of five quarters of Income data. Click on Annual to display five years of data. Scroll down and note the amount of detail.

Return to the Morningstar window and click on Financial Statements. This displays ten years of data, but with less detail than Reuters. I tend to look at the Morningstar data first to see the longer term trends; then switch to Reuters for additional detail.

Tomorrow we will look at the very important measures of Turnover (Efficiency).

| | 200 | | | | | | | | | | | 12,809.1 |
| | 100 | | | | | | | | | | | 4.11 |

(1) Historical Sales Growth **27.3** % (3) Historical Earnings Per Share Growth **31.2** %
(2) Estimated Future Sales Growth **20.0** % (4) Estimated Future Earnings Per Share Growth **20.0** %

2 EVALUATING MANAGEMENT

Company **BED BATH & BEYOND INC.** (BBBY) 10/24/05

		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	LAST 5 YEAR AVG.	TREND UP	TREND DOWN
A	% Pre-tax Profit on Sales (Net Before Taxes ÷ Sales)	11.1	11.1	11.4	11.6	11.5	11.8	12.2	13.4	14.5	15.8	13.5	UP	
B	% Earned on Equity (E/S ÷ Book Value) (Prev. Year)	NMF	35.1	33.0	31.8	30.9	29.6	26.1	26.6	26.6	24.9	26.8		DOWN
A	(Net Before Taxes ÷ Sales)													
C	% Debt to Equity *(LT Debt ÷ Bk Val * Shrs)	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	EVEN	EVEN

PTP growth greater than Sales growth for the past 5 years.
EPS growth greater than Sales growth; very slightly less than PTP growth.
ROE decreasing somewhat.
No Long Term Debt

Evaluating Management Session 3

Today we will look at the Turnover Ratios.

Turnover (or Efficiency)
    Inventory Turnover
    Receivables Turnover
    Assets Turnover

A number of books and articles discuss the importance of tracking Inventory Turnover and Receivables Turnover.

Optional Reading

The section of the 1998 Ratio Analysis workshop that discusses turnover ratios is included as an attachment to this message.

Using Morningstar

The Morningstar site contains data for the three ratios listed above plus a couple more.

Point you browser to: http://www.morningstar.com/
Enter the stock ticker symbol BBBY in the Quotes box (upper left)
Click on Key Ratios and then the Efficiency Ratios tab.

The top of the table shows calculation of the **Cash Conversion Cycle**. If you aren't familiar with this term it will be useful to scroll down to the bottom left of the screen and click on Show Data Definitions. Maximize the window that opens and scroll way down until the **Days Sales Outstanding** paragraph is visible. Read the next four paragraphs.

(It can be informative to look at the Show Data Definitions for all of the Morningstar data tables.)

The bottom half of the data table contains the three turnover ratios listed above plus the Fixed Asset Turnover.

Note that Days Sales Outstanding and Receivables Turnover are just different ways to express the same thing. Specifically:

Days Sales Outstanding = 365 / (Receivables Turnover)
and
Days Inventory = 365 / (Inventory Turnover)

Now let's return to the top of the table. Smaller values for Days Sales Outstanding and Days Inventory are desirable for increasing cash flow. **A significant recent increase in**

either or both can be an early warning signal. Pay particular attention to the TTM values relative to the past year or two.

Next consider the Payables Period. Conventional wisdom is that higher values are desirable for increasing cash flow. This is fine if the creditors agree to a slow pay policy. **An important exception to this occurs when a company becomes short of cash because receivables and/or inventory are increasing. Then an increasing Payables Period reinforces the warning signal given by increasing receivables and inventory.**

Look at the data for BBBY. Things look pretty good. There are no receivables. Days of Inventory has been relatively steady. Over time management has been taking longer to pay bills. This is probably not a problem. Just make a mental note to check on this when we look at the Balance Sheet and Liquidity tomorrow.

Look at the bottom of the table. It shows Asset Turnover that was discussed yesterday. It also shows Fixed Asset Turnover; which has been more constant than Asset Turnover. Just make a mental note to look at this tomorrow.

Finally, I want to reiterate that using the data in this table to track Inventory Turnover, Receivables Turnover and Payables Period can provide very useful warning signals. Also, it will be shown in Session 5 that these ratios are very important supplements to the Cash Flow tables provided by both Morningstar and Reuters.

Tomorrow we will look at Liquidity and Leverage.

Ratio Analysis I-Club-List Workshop, Part 10
Date: Thur. Feb. 12, 1998
Leader: Jay Berry
Subject: Turnover Ratios

This is the tenth part of the Ratio Analysis Workshop. It contains a
discussion of the Turnover Ratios:

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Examples of Ratios
        Price/Value Ratios
        Liquidity Ratios
        Leverage Ratios
        Turnover (or Activity) Ratios
                Receivables Turnover
                Inventory Turnover
                Assets Turnover
        Profitability Ratios
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TURNOVER (OR ACTIVITY) RATIOS

Turnover Ratios are indicators of how well company management is using
available assets to generate sales and cash. It is desirable for these
ratios to have high values.

RECEIVABLES TURNOVER RATIO

The Receivables Turnover Ratio is defined as:

$$\text{Receivables Turnover} = \frac{\text{Sales}}{\text{Receivables}}$$

This ratio is an indicator of how much time elapses before payment is
received for a credit sale. In general it is considered desirable for a
company to have a high Receivables Turnover Ratio. However, the time it
takes to collect receivables varies greatly for different industries.

RECEIVABLES TURNOVER RATIO EXAMPLES

Assume that a company has annual sales of 400 million and receivables
of 100 million.

$$\text{Receivables Turnover} = \frac{\text{Sales}}{\text{Receivables}} = \frac{400}{100} = 4.0$$

This indicates that receivables are 1/4 of annual sales. Hence it takes
about 3 months for customers to pay for their credit purchases.

Another company with the same sales but with receivables of 50 million
would have a Turnover Ratio of 8. Its customers would be paying for
their credit purchases in about 1.5 months.

ANOTHER WAY OF LOOKING AT THE RATIO

It is very common for services that provide ratio data to express
Receivables Turnover in terms of the number of days of sales it
represents. The calculation is:

$$\text{Average Receivables Collection Period} = \frac{360 \text{ days}}{\text{Receivables Turnover Ratio}}$$

AND ANOTHER WAY OF LOOKING AT THE RATIO

A very useful variation of Receivables Turnover is to compare the percentage change in receivables and the percentage change in sales. If the percentage changes are the same then the Receivables turnover is remaining constant. This is just another way of saying that as a company grows and increases its sales, then receivables will tend to increase by the same percentage. However, if the percentage change in receivables is significantly higher than the percentage change in sales then there is a high probability that some of those increased receivables will never be collected. This can lead to an "unexpected negative earnings surprise" when the allowance for doubtful accounts is increased several quarters into the future. The following discussion of the Inventory Turnover Ratio covers this in more detail.

MY OPINION

It is advisable to track the Receivables Turnover Ratio of a company on a quarterly basis. A significant decrease in the value of this ratio (customers are taking longer to pay) is an early warning that problems are developing. In practice I use the percentage change method described in the preceding paragraph. For me, this has proved to be one of two very reliable early warning indicators. The second one is - look down about two inches.

PEER REVIEW

The Market Guide Ratio Comparison report dated 01/16/98 shows that PepsiCo has a Receivables Turnover Ratio of 14.32 and Coca-Cola has a Receivables Turnover Ratio of 10.74 compared to an industry average of 11.62.

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INVENTORY TURNOVER RATIO

The Inventory Turnover Ratio is defined as:

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Inventory}}$$

Cost of Goods Sold is the total cost of producing the inventory sold during a year. The value listed for Inventory on the balance Sheet represents the cost to produce the inventory that is in stock. The Inventory Turnover Ratio is interpreted in the same manner as the Receivables Turnover Ratio.

The preceding comments about tracking percentage changes in receivables and sales also apply to inventory. A situation where inventory is increasing much more rapidly than sales is often an early warning signal. There may be problems on the production line. There may have been a decrease in demand for the product. In any case the value of the inventory may have to be written down leading to another "unexpected negative earnings surprise".

DOWNLOAD THE FOLLOWING CASE STUDY

An excellent article on the subject is "Regina - Cleaning Up, or Getting Cleaned Out?" by Phil Keating. A reprint is available on the NAIC web site at http://www.better-investing.org/bits/bits4.html. An excerpt from the article is shown below.

        START OF EXCERPT
Ignore the Balance Sheet at Your Peril!

It was not necessary to have an MBA or a CFA or even a college course in financial ratio analysis to quickly determine that something was very wrong at Regina. You didn't need to calculate any "fancy" ratios such as average days receivables or inventory turnover. Simply look at the box below, which is data entirely taken from the Value Line sheet in the "Current Position" section.

Regina Co., Inc.	1987	1988	%Change
	(in millions)		
Sales	$128.2	$181.1	41.3%
Receivables	27.8	51.1	83.8%
Inventories	19.6	39.1	99.5%
Cash	0.5	0.9	80.0%

Note the change in receivables and inventories from 1987 to 1988. Compare this with the change in sales from 1987 to 1988.

You will quickly notice that although sales increased 41.3%, inventories and receivables increased over twice as much from year to year. At the same time you will note that the absolute level of cash is less than $1 million dollars for a company doing $181 million in sales, ie. cash is equal to only two days worth of sales. Obviously Regina was not getting paid in cash for shipments that it was booking as sales, and inventory was piling up at an alarming rate! It turned out that K-mart, the largest customer with over 15% of sales, was returning as defective over 30% of Regina's merchandise. Other merchants were doing likewise. Even though a look at the cash position box on the Value Line sheet shows the current ratio is a "superb" 4.09 versus 2.61 the year before, and working capital to sales has increased from 21% to 39%, and cash from 2% to 4% of current liabilities, this company is clearly heading for bankruptcy? It is right there before your eyes in the burgeoning receivables and inventory figures.
        END OF EXCERPT

STB STOCK ANALYST PROVIDES PERCENTAGE CHANGES

The STB Stock Analyst (SA) program calculates and displays the percentage changes similar to those shown in the preceding excerpt. The percentage changes in Receivables and Inventory are displayed in the "Balance Sheet" window. The percentage change in quarterly sales is displayed by selecting "Recent Q figures" while the "SSG Graph" window is open. Note that SA calculates the percentage change of sales for the most recent quarter compared to the same quarter a year ago. The "Regina" article uses the most recent four quarters of sales compared to the previous four quarters. (Note: for SA to perform these calculations you must enter the quarterly data or use the NAIC S&P Datafiles.)

For those who do not care to purchase SA, it is not difficult to create a spreadsheet to perform the calculations for these and other ratios.

TURNOVER RATIOS FROM MARKET GUIDE ARE DIFFERENT

This workshop has suggested that both Receivables Turnover and Inventory Turnover should be tracked by comparing the most recent quarterly data with the data for the corresponding quarter a year ago. Market Guide does not use this approach. Check their glossary and you will find that they use the average of five quarters to calculate both receivables and inventory. Just be aware that the values reported by Market Guide have been "smoothed" by taking the average of five quarters and will not be as useful for "early warning detection" as

using quarterly data. Once again, this illustrates the importance of knowing how ratio values are calculated in order to interpret them properly.

PEER REVIEW

The Market Guide Ratio Comparison report dated 01/16/98 shows that PepsiCo has an Inventory Turnover Ratio of 17.40 and Coca-Cola has an Inventory Turnover Ratio of 5.75 compared to an industry average of 9.16.

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ASSETS TURNOVER RATIO

The Assets Turnover Ratio is defined as:

$$\text{Assets Turnover} = \frac{\text{Sales}}{\text{Total Assets}}$$

As with the previous two Turnover Ratios it is desirable for a company to have a high Assets Turnover value compared to other companies in its industry.

Total Assets does include Receivables and Inventory since they are components of Current Assets. However, for many companies the value of Fixed Assets (i.e., plant, property and equipment) is a significant component of Total Assets. The value of Fixed Assets are not subject to large quarter to quarter changes that might show up in the valuations of Receivables and Inventory when problems are developing. Therefore, this ratio does not provide the reliable early warning signals typical of the other two turnover ratios. However, over time it does provide a measure how effectively Total Assets are being used to generate sales.

PEER REVIEW

The Market Guide Ratio Comparison report dated 01/16/98 shows that PepsiCo has an Assets Turnover Ratio of 1.01 and Coca-Cola has an Assets Turnover Ratio of 1.10 compared to an industry average of 1.06.

Evaluating Management Session 4

Welcome back. Today we are going to look at Liquidity and Leverage. Both of these are based on data contained in the Balance Sheet.

Liquidity

Liquidity refers to the ability of a company to meet its short-term financial obligations. The intent of these ratios is to indicate if a company will be able to generate enough cash to pay bills that are coming due in the near future.

Typical measures of Liquidity are:

Liquidity
 Current Ratio
 Quick Ratio

Often quoted rules of thumb are that the Current Ratio should be 2 or greater and the Quick Ratio should be 1 or greater. Somewhere I read that these values were originally intended to apply to manufacturing companies. The norm will differ significantly for different industries.

Leverage

Leverage ratios measure the extent that a company is relying on debt to fund its operations. Long-term debt may not have to be paid off for many years. However, interest on the debt is a fixed expense that must be paid every year. High interest payments increase the risk that a company may not earn enough to pay the interest if there is an unexpected reduction in sales and profit during a bad year.

Typical measures of Leverage are:

Leverage
 Long Term Debt to Equity (SSG Section 2C)
 Total Debt to Equity
 Long Term Debt to Capital

A rule of thumb is that Long Term debt to Equity should be less than 1. Again, the norm will vary significantly for different industries.

Optional Reading

Excerpts from the 1998 workshop are attached for those who want to get into the details of Liquidity and Leverage.

Using Morningstar

Morningstar combines Liquidity and Leverage into a single category called Financial Health.

Log onto the Morningstar site. Use BBBY for the example company. Select Key Ratios and click on the Financial Health tab.

The top of the data table contains balance sheet data in a common size format based on a percentage of Total Assets. This format is useful for getting some insight into why Asset Turnover has been declining. Based on past experience **my first reaction is to look for big increases in intangibles (goodwill) to explain the decline.**

In this case there are no intangibles until 2004. Even then they are only 4 to 5 percent of assets. **What does catch my eye though is the long term increase in Cash & Short Term Investments.** A large cash balance increases Liquidity but it doesn't generate sales**. I am willing to accept this as the reason Asset Turnover has been declining.**

Now scroll down to the bottom of the data table to see ten years of data for the Current Ratio, Quick Ratio and Debt/Equity. Morningstar chose to provide data for Financial Leverage instead of Total Debt to Equity and/or Long Term Debt to Capital.

The Current Ratio and Quick Ratio seem to be quite adequate. As noted yesterday management has slowed the payment of bills. That hasn't had a noticeable impact on these ratios. Anyone who is really interested can switch to the Reuters site and compare the industry averages.

Debt/Equity is zero. We already knew that from SSG Section 2C.

Financial Leverage has been close to 1.5. This is excellent. Financial Leverage cannot be less than 1. It can be 10 or more for highly leveraged businesses such as banks. An Appendix with more details about the calculation of Financial Leverage is attached to this message.

Overall, Liquidity and Leverage are very good.

Some people may prefer to look at Balance Sheet data in the conventional format with dollar values instead of percentages. In that case just click on Financial Statements and then click on 10-Yr Balance Sheet.

Using Reuters Data

As in the case of the Income Statement, Reuters provides a Balance Sheet that has somewhat more detail than Morningstar. The added detail wasn't needed for BBBY. But keep this mind for future studies.

Reuters also provides a summary of recent Financial Strength ratios.

Open another instance of your browser and log onto: www.reuters.com

Enter BBBY in the Quotes box and when the page opens click on Ratios. Scroll down to the summary table of Financial Strength Ratios. This table provides a quick comparison of the company, its Industry, Sector and S&P 500.

Data for five ratios are provided. They include three of the four ratios covered by Morningstar plus Total Debt to Equity and Interest Coverage.

Tomorrow we will conclude the workshop by looking at the Statement of Cash Flows

Introduction

Morningstar provides two measures of Leverage under the category of Financial Health

One is Long term Debt to Equity. This is commonly abbreviated to simply Debt/Equity. An often used rule of thumb is that it is desirable for Debt/Equity to be less than one.

The second is Financial Leverage; defined as Total Assets/Equity. Morningstar also includes Financial Leverage in the Profitability Ratios table. This was discussed in Session 2. It is reasonable to inquire about what are desirable values for Financial Leverage. I don't remember seeing any articles on this subject. So I will present my impression of how Financial Leverage and Debt/Equity may be related.

An example will be used to assist in the following discussion.

Log on to Morningstar.

Point you browser to: www.morningstar.com
Enter BUD in the Quotes box (upper left).
Scroll down a little until you see Key Ratios on the left. Click on it.
Then click on the Financial Health tab.

Scroll down to the bottom of the data table.

Visual Interpretation

I picked BUD as an example just because Debt/Equity has been consistently increasing.

It is easy to see that Financial Leverage is also consistently increasing. This may be all you care to know. If so, just stop here. If you want grind through a little math to get a better feel for what is going on, keep reading.

A Mathematical Guideline

There is no simple one-to-one relationship between Financial Leverage (FL) and Debt/Equity (D/E). However, a guideline that shows minimum values of FL relative to D/E does exist.

The mathematical process is simple. It just involves the substitution of identities. It will be shown that:

FL will always be greater than (1 + D/E).

The substitution process is shown below.

FL = Total Assets/Equity

substitute Total Assets = Total Liabilities + Equity(E)
to obtain
FL = Total Liabilities/E + E/E = Total Liabilities/E + 1 = 1 + (Total Liabilities/E)

Next expand Total Liabilities (look at the Morningstar data table for guidance).

Total Liabilities = Current Liabilities + Long Term Debt(D) + Other Long Term Liab.
Divide by E and rearrange terrms.
Total Liabilities/E = D/E + (Current Liabilities/E + Other Long Term Liab./E)

The final substitution produces:

FL = (1 + D/E) + Current Liabilities/E + Other Long Term Liab./E

Therefore; FL > (1+ D/E)

How much greater depends on the two additional terms. They vary for different companies. They may also vary over time for the same company as can be seen by looking at the data for BUD.

Ratio Analysis I-Club-List Workshop, Part 9
Date: Mon. Feb. 9, 1998
Leader: Jay Berry
Subject: Leverage Ratios
*04
This is the ninth part of the Ratio Analysis Workshop. It contains a
discussion of the Leverage Ratios.

Examples of Ratios
        Price/Value Ratios
        Liquidity Ratios
        Leverage Ratios
                Long Term Debt to Equity
                Long Term Debt to Capital Ratio
                Total Debt to Equity
        Turnover (or Activity) Ratios
        Profitability Ratios

LEVERAGE RATIOS

INTRODUCTION

Leverage ratios measure the extent that a company is relying on debt to
fund its operations. Long-term debt may not have to be paid off for
many years. However, interest on the debt is a fixed expense that must
be paid every year. High interest payments increase the risk that a
company may not earn enough to pay the interest if there is an unexpected
reduction in sales and profit during a bad year.

BALANCE SHEET

Data used to calculate Leverage ratios are contained in the Balance
Sheet. Low values for the Leverage ratios contribute to a "strong"
balance sheet.

Typically major components of Total Assets could be:
        Current Assets
        Plant, Property and Equipment (PPE)
        Intangible Assets
        Other Assets

Typically major components of Total Liabilities could be:
        Current Liabilities
        Long Term Debt
        Other Liabilities
_____

LONG TERM DEBT TO EQUITY RATIO

The Long Term Debt to Equity Ratio is defined as:

$$\text{Long Term Debt to Equity} = \frac{\text{Long Term Debt}}{\text{Equity}}$$

BACKGROUND

Articles often state that the Long term Debt to Equity Ratio should be
less than one. This may be appropriate for many manufacturing
companies. However, utility companies tend to have a relatively stable
flow of monthly payments from their customers to cover interest
payments on long term debt. So most utilities can have more long term
debt than equity. Conversely, small start-up companies and technology

companies have very unpredictable cash flows and few assets that could be used as collateral for long term debt. These types of companies may not qualify for long term debt or may find that the cost of debt would be too high (because of higher risk to the lender) and will tend to have low Long Term Debt to Equity Ratios.

LONG TERM DEBT TO EQUITY RATIO EXAMPLE

Assume that a company has a balance sheet as shown in the following table:

Data For Long Term Debt to Equity Ratio Example

```
Current Assets                   300
Plant, Property and Equipment   1700
Other Assets                       0
        TOTAL ASSETS            2000

Current Liabilities              150
Long Term Debt                   925
Other Long Term Liabilities        0
Equity                           925
      TOTAL LIABILITIES
      + Shareholders Equity      2000
```

$$\text{Long Term Debt to Equity} = \frac{\text{Long Term Debt}}{\text{Equity}} = \frac{925}{925} = 1.00$$

In this example Long Term Debt equals Equity so the Long Term Debt to Equity ratio is 1.0.   That's all there is to the calculation.

Someone interested in more detail could look at the notes in the company financial reports to determine when the debt has to be paid off or rolled over. Value Line indicates how much debt is due in 5 years (in the CAPITAL STRUCTURE box).

PEER REVIEW

The Market Guide Ratio Comparison report dated 01/16/98 shows that PepsiCo has a Long term Debt to Equity Ratio of 0.56 and Coca-Cola has a Long Term Debt to Equity of 0.13 compared to an industry average of 0.47.

The November 14, 1997 Value Line CAPITAL STRUCTURE boxes show that PepsiCo is paying $250.0 mill. in long term interest and has 6.5x interest coverage. Coca-Cola is paying $62.0 mill. in long term interest and has 17x interest coverage. Any comments about the interaction of long term debt and interest coverage?
_____

LONG TERM DEBT TO CAPITAL RATIO

The Long Term Debt to Capital Ratio is defined as:

$$\text{Long Term Debt to Capital} = \frac{\text{Long Term Debt}}{\text{Capital}}$$

Capital is the sum of Long term Debt plus Equity. So:

```
                         RAW - Leverage
                              Long Term Debt
       Long Term Debt (LTD) to Capital = -----------------------
                              Long Term Debt + Equity
```

The Long Term Debt to Capital Ratio uses the same two quantities (Long
Term Debt and Equity) as the Long Term Debt to Equity Ratio. Even
though the values of the ratios will be different, they convey the same
type of information.

If, as in the preceding example, the Long Term Debt to Equity Ratio has
a value of 1.0 (Long Term Debt = Equity) then the Long Term Debt to
Capital Ratio will have a value of 0.5.

```
                     LTD           925
   LTD to Capital = ------------ = ------- = 0.5
                    LTD + Equity   925+925
```

Users of Value Line may find that it is convenient to use the Long Term
Debt to Capital Ratio. This is because Value Line usually shows the
ratio of Long Term Debt to Capital in the CAPITAL STRUCTURE box.

PEER REVIEW

Market Guide does not report a value for this ratio.
_____

TOTAL DEBT TO EQUITY RATIO

The Total Debt to Total Equity Ratio is defined as:

```
                                   Total Debt
          Total Debt to Equity Ratio = ------------
                                     Equity
```

Total Debt is the sum of Long Term Debt plus Debt Due (a component of
Current Liabilities).

There are situations where a company may roll-over its Debt Due into
new Long Term Debt. There are also cases where a company continually
keeps borrowing on a short term basis while having little or no Long
Term Debt. In these cases Total Debt may be a better indicator of
Leverage than Long Term Debt.

TOTAL DEBT TO EQUITY RATIO EXAMPLE 1

The same Balance Sheet that was used for the long Term Debt
to Equity Ratio and the Long term Debt to Capital Ratio examples is
shown below with the Current Liability entry separated into two
components.

```
Current Assets                     300
Plant, Property and Equipment      1700
Other Assets                       0
         TOTAL ASSETS              2000

Current Liabilities
    Accounts Payable               100
    Debt Due                       50
Long Term Debt                     925
Other Long Term Liabilities        0
Equity                             925
```

```
        TOTAL LIABILITIES
        + Shareholders Equity        2000
```

Total Debt to Total Assets = (925 + 50)/925 = 1.054

TOTAL DEBT TO TOTAL ASSETS RATIO EXAMPLE 2

Some companies use short term bank loans to fund their operation instead of taking on long term debt. These short term loans appear on the balance sheet as Debt Due.

The Total Debt to Equity Ratio is useful for tracking the leverage of companies that use short term debt instead of long term debt. Its value is independent of how the Total Debt is distributed between Long Term Debt and Debt Due (current portion of long term debt plus short term bank loans).

As an extreme example to illustrate this point let's modify the balance sheet example that was used in the Long Term Debt to Equity Ratio discussion. Assume that the 925 Long Term Debt is transformed to short term bank loans and added to the Debt Due component of Current Liabilities. Then:

```
Current Assets                       300
Plant, Property and Equipment       1700
Other Assets                           0
        TOTAL ASSETS                2000


Current Liabilities
    Accounts Payable                 100
    Debt Due                         975
Long Term Debt                         0
Other Long Term Liabilities            0
Equity                               925
        TOTAL LIABILITIES
        + Shareholders Equity       2000
```

Total Debt to Total Assets = 975/925 = 1.054, just as in the preceding example.

Since there is no Long Term Debt the Long Term Debt to Equity Ratio and the Long Term Debt to Capital Ratio will be zero. Of course the Liquidity Ratios (Current Ratio and Quick Ratio) would look terrible. This again illustrates that it is important to look at a set of ratios and to understand the interactions between them.

PEER REVIEW

The Market Guide Ratio Comparison report dated 01/16/98 shows that PepsiCo has a Total Debt to Equity Ratio of 1.41 and Coca-Cola has a Total Debt to Equity Ratio of 0.42 compared to an industry average of 0.93.

****
Ratio Analysis I-Club-List Workshop, Part 7
Date: Mon. Feb. 2, 1998
Leader: Jay Berry
Subject: Liquidity Ratios - the Current Ratio

This is the seventh part of the Ratio Analysis Workshop. It begins the
discussion of Liquidity Ratios.
*03
Examples of Ratios
        Price/Value Ratios
        Liquidity Ratios
                Current Ratio
                Quick Ratio
        Leverage Ratios
        Turnover (or Activity) Ratios
        Profitability Ratios

The Current ratio is discussed in this session. The Quick Ratio will be
discussed in part 8.

LIQUIDITY RATIOS

INTRODUCTION

Liquidity ratios are used to measure the ability of a company to meet
its short-term financial obligations. Sometimes the term solvency is
used instead of liquidity. The intent of these ratios is to indicate if
a company will be able to generate enough cash to pay bills that are
coming due in the near future.

Data used to calculate Liquidity ratios are contained in the Balance
Sheet. A Balance Sheet contains details about the Total Assets and
Total Liabilities of a company. Analysts sometimes praise a company by
saying that it has a "strong" or "clean balance sheet". The terms
"strong" and "clean" are used interchangeably to indicate that the
assets are adequate to pay off the liabilities in a timely manner
during both good and bad business conditions. High values for the
liquidity ratios discussed below are an indication of a "strong"
balance sheet with respect to meeting near term obligations. The
Leverage ratios, discussed after the Liquidity ratios, also enter into
determining if a company has a "strong" balance sheet.
_____

CURRENT RATIO

The Current Ratio is defined as:

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

The Current Ratio is probably the best known of the liquidity ratios.

BACKGROUND

Somewhere, many years ago, I read that the current ratio was the first
ratio used by bankers to determine if a company was worthy of receiving
a loan. At that time it was considered that a company must have a
current ratio of 2 or more in order to qualify for a loan. I do not
know how or why this threshold was established. However many books and
articles that discuss the current ratio still use 2 as a threshold
value. Sometimes there will be a qualifying statement that the value of

2 applies to manufacturing companies; but there is no guidance about
what values should be used for other types of companies. Can anyone
else provide some insight about appropriate values for the Current
Ratio? For now, my suggestion is to compare the current ratio of a
company with the average for its industry.

THE BALANCE SHEET

Current Assets and Current Liabilities are listed in a company's
Balance Sheet. Current Assets are the first sub-total at the top of the
list of assets. Current Liabilities are the first sub-total at the top
of the list of liabilities. Knowledge of the components that are summed
to calculate current assets and current liabilities will be helpful for
interpreting the significance of the current ratio.

Current Assets are those assets that will normally convert to cash
within one year or the company's normal business cycle, whichever is
longer.
Current Assets usually consist of four components:
        Cash and Equivalents
        Accounts Receivable
        Inventory
        Other

Note that the four components are listed in order of the relative time
it usually takes to convert them to cash. Cash and Equivalents are
already in the form of cash. Accounts Receivable represent inventory
that has been sold on credit and delivered to customers; it may take 30
to 90 days until the customers pay with cash. Inventory still has to be
sold; then it will take another 30 to 90 days before payment will be
received. Other is a catchall category for all other assets that will
be converted to cash sometime within a year.

Next consider Current Liabilities. These are liabilities that will
normally be settled with cash within one year. The components of
current liabilities are not as standardized as the components of
current assets. However, typical components of current liabilities
could include:
        Accounts payable
        Notes payable to banks
        Current maturity of long term debt
        Current potion of capital lease payments
        Accrued taxes
        Other

THE VALUE LINE CURRENT POSITION BOX

Value Line shows current assets and current liabilities in a box
labeled CURRENT POSITION. This box is located a little over half way
down on the left side of a value Line sheet. The box shows three sets
of current position data; data for each of the past two years plus the
current position at the end of the most recently reported quarter. Note
that value Line uses the same components for current assets that were
listed above. However, Value Line separates current liabilities into
just three components:

        Accounts payable
        Debt due
        Other
Accounts payable listed by Value Line is the same as the Accounts
payable listed above.

Debt due listed by Value Line includes items such as Notes payable to

banks, Current maturity of long term debt and the Current portion of capital lease payments.

Other listed by Value Line includes everything else that contributes to current liabilities.

The three components of current liabilities used by Value Line are adequate for this workshop and will be used for the examples that follow.

S&P shows the Current Assets, Current Liabilities and Current Ratio for each of the past ten years. S&P does not show the components of either Current Assets or Current Liabilities.

CURRENT RATIO EXAMPLE 1

This example illustrates the influence of short term debt on the current ratio.

Assume that two companies, A and B, have the components of Current Assets and Current Liabilities shown below. The two companies are identical except that Company B has 100 (million) of Debt Due.

Data For Current Ratio Examples 1 and 2

	Company A	Company B
Cash	100	100
Accounts Receivable	100	100
Inventory	100	100
Other	0	0
Total Current Assets	300	300
Accounts Payable	100	100
Debt Due	0	100
Other	0	0
Total Current Liabilities	100	200
Current Ratio	3	1.5

The degrading influence of having Debt Due is apparent.

CURRENT RATIO EXAMPLE 2

This example illustrates that long term debt does not influence the current ratio.

Looking back to example 1 assume that Company B still has 100 million of debt, but that it is not due within one year. The debt might not be due for two years or even twenty years. In any case there is no Debt Due for either company and they both will have a current ratio of 3.

Does this represent a failure of the current ratio? Keep in mind that the current ratio is intended to measure short-term liquidity. The effect of long-term debt is detected by the Leverage Ratios that will be discussed later in this workshop. This example does illustrate why it is important to look at a set of ratios and not rely on the value of just one ratio.

CURRENT RATIO EXAMPLE 3

This example illustrates that just looking at the value of the current ratio is not always adequate.

Assume that Company A has developed a problem on its production line. The items coming out the end of the production line are defective in some way. Some of the items are being held for re-work before they can be sold. Some defective items have been sold and the customers are holding back payment until the problem is corrected. Accounts Receivable and Inventories are increasing. Cash is decreasing. The situation is illustrated in the following table.

Data For Current Ratio Example 3

	Company A
Cash	0
Accounts Receivable	150
Inventory	150
Other	0
Total Current Assets	300
Accounts Payable	100
Debt Due	0
Other	0
Total Current Liabilities	100
Current Ratio	3

The Current Ratio is still 3, but the ability of Company A to pay its bills has definitely decreased. Does this represent a failure of the Current Ratio? Possibly. In practice the company would probably have slowed down in paying its Accounts payable and/or borrowed some money so Debt Due would no longer be zero. Either approach would tend to lower the Current Ratio. Even so, the Current Ratio is not always a good ratio for detecting problems associated with Accounts Receivable and Inventory. We will return to this example when Turnover Ratios are discussed.

PEER REVIEW

The Market Guide Ratio Comparison report dated 01/16/98 shows that PepsiCo has a Current Ratio of 0.67 and Coca-Cola has a Current Ratio of 0.91 compared to an industry average of 0.84.

Part 8 will cover the Quick Ratio.
++
From: glsimms@juno.com
Subject: Re: Ratio Analysis Workshop-Part 7
To: i-club-list@better-investing.org
Date: Mon, 02 Feb 1998 13:34:55 EST

I think that this comment really should be made after part 8 of the Tutorial but since Jay has so nicely listed the components of Current Assets and Current Liabilities, I will make it here.

As I believe we will see in the next tutorial, the Quick ratio makes an attempt to remove an item (inventory) that is more difficult to convert to cash in an effort to show just how much cash the company can come up with on short notice.

Last weekend I bought a programmed workbook that runs you through some basic ratio calculation. It is: The Motley Fool Investment

Workbook.

They discuss a ratio I'd not heard of before called the Flow Ratio or
the Foolish Flow Ratio.

It is defined as (Current Assets - Cash) / Current Liabilities

Their idea is that the best companies have low receivables and
Inventories and high payables. The first two are assets and the latter
is a liability.

It appears to be a measure of management's quality rather than
liquidity.

Low receivables and inventory show a company in control of its destiny.
These are usually monitored by two other ratios, Days sales outstanding
and Days sales in inventory.

High Payables shows that the company is in a position to delay payments
to the companies it buys from.

A ratio below 1.25 is considered good and the lower the number the
better.

This seems like the Return on Equity ratio that monitors several
other ratios (net profit margin x asset turnover x leverage).

Has anyone had any experience with this ratio?

Does it seem valuable?

What do you think?

Gary
++
+++
From: Jay Berry <75020.2512@compuserve.com>
Subject: Re: Ratio Analysis Workshop-Part 7
To: I-CLUB-LIST <I-CLUB-LIST@better-investing.org>
Date: Tue, 3 Feb 1998 10:07:24 -0500

Gary Simms posted:

>> Their idea is that the best companies have low receivables and
inventories and high payables ...Low receivables and inventory show a
company in control of its destiny.

High Payables shows that the company is in a position to delay payments
to the companies it buys from. <<

The general idea seems OK, but it is not clear to me that the ratio
improves the form of information available from other ratios. Still,
it is up to each individual to select the ratios they want to use.

>>A ratio below 1.25 is considered good and the lower the number the
better.<<

A very low number may not always be good. Some books and articles I
have read point out that:

When a company has very low inventory it may miss out on sales because
it cannot fill orders in a timely manner.

When a company has very low receivables its tight credit policy may be causing it to loose sales by refusing orders from credit worthy customers.

A company with high accounts payable may be giving up discounts for timely payment.

>>These are usually monitored by two other ratios, Days sales outstanding and Days sales in inventory.<<

Ah, yes. Two of my favorite early warning ratios. They will be discussed in part 10 of the workshop.

Jay
****

Ratio Analysis I-Club-List Workshop, Part 8
Date: Thur. Feb. 5, 1998
Leader: Jay Berry
Subject: Liquidity Ratios - the Quick Ratio

This is the eighth part of the Ratio Analysis Workshop. It completes the discussion of Liquidity Ratios.

Examples of Ratios
        Price/Value Ratios
        Liquidity Ratios
                Current Ratio
                Quick Ratio
        Leverage Ratios
        Turnover (or Activity) Ratios
        Profitability Ratios

The quick ratio is discussed in this session.

QUICK RATIO

The Quick Ratio (also called the Acid Test Ratio) is defined as:

$$\text{Quick Ratio} = \frac{\text{Cash and Equivalents + Accounts Receivable}}{\text{Current Liabilities}}$$

The Quick Ratio is considered to be a more conservative measure of liquidity than the Current Ratio. The Quick Ratio compares the two most liquid components of Current Assets (Cash and Accounts Receivable) with Current Liabilities. Articles that discuss the Quick Ratio often state that the ratio should have a value of one or greater.

Generally factors that will cause the Current Ratio to increase or decrease will also cause the Quick Ratio to move in the same direction.

QUICK RATIO EXAMPLE 1

This example illustrates the influence of short term debt on the current ratio.

The table below contains data taken from the table used in example 1 for the Current Ratio.

Data For Quick Ratio Example 1

                        Company A   Company B

Cash	100	100
Accounts Receivable	100	100
Total For Quick Ratio	200	200
Accounts Payable	100	100
Debt Due	0	100
Other	0	0
Total Current Liabilities	100	200
Quick Ratio	2	1

The existence of Debt Due causes the Quick Ratio of Company B to be
less than for Company A; just as it did in the Current Ratio example.
Notice though the quandary for someone who rigidly adhered to a
requirement that the Current Ratio must be two or greater and the Quick
Ratio must be one or greater. Company B fails the test for the Current
Ratio, but passes the test for the Quick Ratio.

QUICK RATIO EXAMPLE 2

The left side of the table below contains data taken from the table
used for Current Ratio example 3. Remember that examples 1 and 3 for
the Current Ratio involved changing how much value was assigned to the
components of Current Assets; the total value of Current Assets did not
change. Note Though that the sum of the two components for the
numerator of the Quick Ratio has decreased from 200 to 150. Hence, for
this example, the Quick Ratio is better for detecting the shift of cash
into inventory.

Data For Quick Ratio Example 2

	Company A		Company A
Cash	0		0
Accounts Receivable	150		150
Inventory	150		
Other	0		
Total Current Assets	300	Total Quick Assets	150
Accounts Payable	100		100
Debt Due	0		0
Other	0		0
Total Current Liabilities	100		100
Current Ratio	3	Quick Ratio	1.5

The preceding examples were constructed to illustrate situations where
the Quick Ratio may be more sensitive than the Current Ratio for
detecting decreasing liquidity. In practice this may or may not be
true.

Note that the Quick Ratio does not address the possibility that some of
the Accounts Receivable may never be collected. This will be addressed
in the discussion of Turnover Ratios.

SUMMARY

The primary purposes for presenting the preceding examples were to:
(1) illustrate that looking at the components of Current Assets and
Current Liabilities may be more useful than just looking at the

value of the Current Ratio and the Quick Ratio and
(2) introduce some situations where it will be important to look at
additional categories of ratios.

PEER REVIEW

The Market Guide Ratio Comparison report dated 01/16/98 shows that
PepsiCo has a Quick Ratio of 0.27 and Coca-Cola has a Quick Ratio of
0.54 compared to an industry average of 0.47.

  ****

Welcome to Evaluating Management Session 5

Introduction

Today we are going to look at using Cash Flow to evaluate management. There are a number of definitions for Cash Flow and differences of opinion about how to interpret Cash Flow. Getting into these is far beyond the scope of this workshop. Therefore, I am going to present an example using the methodology described in detail in a recent workshop.

In October, Diane Graese presented an excellent workshop on using the Statement of Cash Flows (SCF). The SCF workshop used examples of company annual financial statements with three years of data.

The SCF workshop ended with a final exam. For the exam Diane provided a copy of the CONSOLIDATED STATEMENT OF CASH FLOWS and a copy of Section 1 of the SSG for Ballantyne Of Omaha Inc. (BTN) Then she asked:

"What conclusions do you draw from each? Is this company worthy of more study and possibly investment?"

Three people responded with answers to the questions. Then Diane provided a copy of her "ANSWER to Final Exam."

This concluding session of the Evaluating Management Workshop describes how Cash Flow data provided by Morningstar and Reuters could be used, instead of the CONSOLIDATED STATEMENT OF CASH FLOWS, to answer the Final Exam questions.

Review the SCF workshop Final Exam.

Three files are attached to this message. They are the two files that were provided for the Final Exam (forumhandout3.pdf and forumhandout4.pdf) plus the "ANSWER to Final Exam" (forumexamanswer.pdf). I recommend printing these files.

Read the "ANSWER to Final Exam" in order to gain an understanding of how data in the CONSOLIDATED STATEMENT OF CASH FLOWS was processed and used. This provides the basis for appreciating the pros and cons for using data provided by Morningstar and Reuters.

Using Morningstar Data.

The Morningstar and Reuters sites provide more historical data, ten years and five years respectively, but fewer details than company financial statements. Even so, it will be shown that there is enough information to perform most of the analysis methods

described in the SCF workshop. In fact, the format used by Morningstar is very similar to the format used in the SCF workshop.

Cash Flow from Operations

We will start by concentrating on Cash Flow from Operations (CFO). First, just quickly observe the large number of entries in the CONSOLIDATED STATEMENT OF CASH FLOWS. Then look at the second page of the ANSWER and notice how data has been compressed into a much less cluttered format that draws attention to the "Difference" entry. Morningstar uses a similar format.

Point you browser to: www.morningstar.com
Enter BTN in the Quotes box (upper left).
Scroll down a little until you see Financial Statements on the left. Click on it.
Then click the tab for 10-Yr Cash Flows.

The table has data for 1996, 1997 and 1998 on the far left. Not exactly the same format as data on the second page of the ANSWER printout, but close. I do like the format in the ANSWER printout. My eye is drawn to the "Difference" entry more than to the equivalent sum of "Deferred Taxes" and "Other" at Morningstar. Even so, the ability to quickly see data for ten years without having to enter data manually appeals to me for an initial analysis.

Read the portion of the ANSWER printout that discusses the large increases in Inventory and Receivables. It mentions that ratio analysis could have been used to determine Days Sales and Days Receivables outstanding. This would required additional calculations and was not deemed necessary for the Final Exam.

The situation is somewhat different when using the Morningstar Cash Flow table. The changes in Inventory and Receivables are not displayed. However, values for Days Sales and Days Receivables outstanding are provided in the Efficiency Ratios table. No additional calculations are needed.

To use Morningstar to check if there are increases in Inventory and/or Receivables, click first on Key Ratios and then the Efficiency Ratios tab.

Unfortunately there is no data prior to 1997. Even so, the significant increase in Days Sales and Days Inventory from 1997 to 1998 is apparent. This provides the same type warning signals that are then discussed in more detail in the "ANSWER to Final Exam."

Now return to Financial Statements and 10-Yr Cash Flows.

Cash Flow from Investing

The values for Investing activities closely match those in the printout of the CONSOLIDATED STATEMENTS OF CASH FLOWS. Some small values round out to

zero in the conversion of dollars to millions of dollars. For some reason the acquisition in 1997 is placed in "other". This is one reason to go back to the source document IF your cursory review indicates something that might be of interest. Many times things get lumped into Other because there are only so many lines on the Morningstar layout. If the number in Other is large… there is very likely more detail in the original filings.

Even so, it is easy to use the Morningstar table to follow the discussion in the printout of the "ANSWER to Final Exam." Morningstar shows the same increases in Acquisitions and Capital Expenditures.

Cash Flow from Financing

Morningstar shows the stock issuances in 1996 and 1997, stock purchase in 1998 and the changes in Debt that are mentioned in the "ANSWER to Final Exam." Some of the change in Debt was lumped into Other; as in the case of Acquisitions.

Using Reuters.

Since Reuters provides five years of historical data it can't be used for the SCF workshop final exam. This will not be an issue in more typical cases where we are evaluating the more recent data.

Reuters does have some useful features for the typical case of looking at the most recent data. One of these is the inclusion of quarterly data. Another is that the CFO table contains one more category of data that I think is useful. Specifically it separates the Morningstar "Other" category into Non-Cash Items and Changes in Working Capital.

Working Capital is defined as Current Assets – Current Liabilities. The change in Working Capital is often dominated by changes in Inventory and Receivables. So a large negative value for Changes in Working Capital is a useful warning signal. It would be an alert to return to Morningstar and look at the Key Ratios – Efficiency table.

Conclusions

Even though Morningstar and Reuters provide fewer details than company financial reports, they are quite adequate for an initial evaluation of Cash Flows. They have the advantages of providing a longer term perspective and significantly reducing the time needed for manual processing of data.

FINAL COMMENTS

Thanks for participating in this workshop. I hope some of the topics will be useful during your future evaluations of management.

BALLANTYNE OF OMAHA, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASHFLOWS
YEARS ENDED DECEMBER 31, 1998, 1997 AND 1996

	1998	1997	1996
Cash flows from operating activities:			
Net income	$ 8,343,734	$ 7,709,339	$ 5,036,693
Adjustments to reconcile net income to			
net cash provided by operating activities:			
Depreciation of plant and equipment	1,476,275	783,338	70,040
Other amortization	376,948	218,434	137,080
Loss on sale of fixed assets	7,297	--	--
Deferred income taxes	(17,431)	(261,265)	14,901
Changes in assets and liabilities,			
net of assets acquired:			
Accounts receivable	(5,243,401)	(2,210,958)	(3,377,475)
Inventories	(3,065,576)	(4,676,096)	(2,594,966)
Other current assets	77,776	(2,326)	(51,829)
Accounts payable	(2,561,127)	2,069,566	2,083,256
Accrued expenses	104,361	294,212	164,944
Income taxes payable	1,254,342	1,352,094	(986,778)
Other assets	(253,836)	(5,420)	5,882
Net cash provided by			
operating activities	499,362	5,270,918	901,748
Cash flows from investing activities:			
Business combinations	(3,886,922)	(1,150,000)	--
Capital expenditures	(3,594,472)	(3,531,913)	(1,016,930)
Proceeds from sale of equipment	28,500	--	--
Net cash used in investing			
activities	(7,452,894)	(4,681,913)	(1,016,930)
Cash flows from financing activities:			
Proceeds from line of credit	12,229,000	--	--
Payments on long-term debt	(220,000)	(835,744)	(7,983,436)
Net proceeds from equity offering	--	--	13,650,787
Proceeds from employee stock purchase plan	99,561	60,771	58,752
Proceeds from exercise of stock options	89,256	1,844,882	227,500
Purchase of common stock for treasury	(12,351,106)	--	--
Net cash provided by (used in)			
financing activities	(153,289)	1,069,909	5,953,603
Net increase (decrease) in cash			
and cash equivalents	(7,106,821)	1,658,914	5,838,421
Cash and cash equivalents			
at beginning of year	7,701,507	6,042,593	204,172
Cash and cash equivalents at end of year	$ 594,686	$ 7,701,507	$ 6,042,593

See accompanying notes to consolidated financial statements.

Stock Selection Guide ®

The most widely used aid to good investment judgment

Company: BALLANTYNE OF OMAHA INC		Date: Oct 19, 05
Prepared by: DMG		Data source: S & P
Where traded: BTN - AMEX	Industry: Movies & Entertainment	

CAPITALIZATION - Outstanding Amounts

		%Insiders	%Institution
Preferred			
Common		0.0	0.0
Debt	% to Tot.Cap. 0.0	% Pot. Dil.	0.0

1 VISUAL ANALYSIS of Sales, Earnings and Price

RECENT QUARTERLY FIGURES

Jun 2005	Sales	EPS
Latest Quarter	$13	$0.08
Year Ago Quarter	$12	$0.06
Percentage Change	11.9%	33.3%
Scale X	2.0 M	0.10